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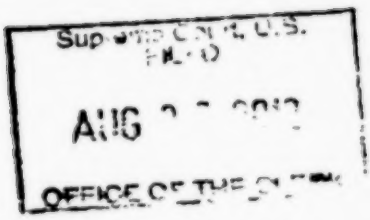

Nos. 11-338 and 11-347

In the Supreme Court of the United States

DOUG DECKER, IN HIS OFFICIAL CAPACITY AS OREGON STATE FORESTER, ET AL., PETITIONERS
v.
NORTHWEST ENVIRONMENTAL DEFENSE CENTER, RESPONDENT

GEORGIA-PACIFIC WEST, INC., ET AL., PETITIONERS
v.
NORTHWEST ENVIRONMENTAL DEFENSE CENTER, RESPONDENT

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

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PETITIONS FOR CERTIORARI FILED SEPTEMBER 13, 2011
CERTIORARI GRANTED JUNE 25, 2012

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IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF OREGON

No. 06-1270-BR

Northwest Environmental Defense Center, Plaintiff,

v.

Doug Decker, Oregon State Forestor, in his official capacity, Jennifer Phillipi, John Blackwell, Sybill Ackerman, Peter Hayes, Calvin Mukumoto, Gary Springer, Steve Wilson, mebers of the Oregon Board of Forestry, in their official capacity, Hampton Tree Farms, Inc., Stimson Lumber Co., Georgia-Pacific West, Inc. and Swanson Group, Inc., Defendants

and

Oregon Forest Industries Council, American Forest and Paper Association, and Tillamook County, Intervenor-Defendants.

RELEVANT DOCKET ENTRIES

NO.	DATE	DESCRIPTION
1	09/05/2006	Complaint pursuant to Section 505 of the Clean Water Act
7	09/22/2006	First Amended Complaint pursuant to Section 505 of the CWA

NO.	DATE	DESCRIPTION
16	11/03/2006	Motion to Dismiss by State of Oregon Defendants
17	11/03/2006	Memorandum in Support of Motion to Dismiss by State of Oregon Defendants
21	11/03/2006	Motion to Dismiss by Timber Defendants
22	11/03/2006	Memorandum in Support of Motion to Dismiss by Timber Defendants
23	11/03/2006	Industry defendants' and defendant-intervenors' request for judicial notice
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46	12/06/2006	Plaintiff's Response to State of Oregon's Motion to Dismiss
47	12/06/2006	Plaintiff NEDC's request for judicial notice
50	12/21/2006	State defendants' request for judicial notice
51	12/22/2006	Reply Memorandum in Support of State of Oregon's Motion to Dismiss

NO.	DATE	DESCRIPTION
52	12/22/2006	Reply Memorandum in Support of Timber Defendants' Motion to Dismiss
53	01/10/2007	Plaintiff's Memorandum in Opposition to EPA's Amicus Curiae brief
54	01/10/2007	Plaintiff NEDC's second request for judicial notice
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IN THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

No. 07-35266

Northwest Environmental Defense Center, Plaintiff-Appellant,

v.

Marvin Brown, Oregon State Forestor, in his official capacity, Stephen Hobbs, Barbara Craig, Diane Snyder, Larry Giustina, William Heffernan, William Hutchison, Jennifer Phillipi, mebers of the Oregon Board of Forestry, in their official capacity, Hampton Tree Farms, Inc., Stimson Lumber Co., Georgia-Pacific West, Inc. and Swanson Group, Inc., Defendants-Appellees

and

Oregon Forest Industries Council, American Forest and Paper Association, and Tillamook County, Intervenor-Defendants-Appellees.

RELEVANT DOCKET ENTRIES

NO.	DATE	DESCRIPTION
5	04/06/2007	Plaintiff-Appellant NEDC's statement of issues
23	09/17/2007	Plaintiff-Appellant's brief
24	09/17/2007	NEDC's motion for leave to file Riskedahl declaration

NO.	DATE	DESCRIPTION
26	09/24/2007	Amicus brief and request for judicial notice of the Natural Resources Defense Council and the Environmental Protection Information Center
40	11/09/2007	Amicus Curiae California Forestry's and Pacific Legal Foundation's brief
43	11/09/2007	Defendants-Appellees Timber Companies' brief
44	11/09/2007	Defendants-Appellees State of Oregon's brief
42	11/16/2007	Amicus Curiae brief of the United States
46	12/17/2007	Plaintiff-Appellant's reply brief
57	08/04/2008	NEDC's Fed. R. App. P. 28(j) notice of supplemental authority
58	08/07/2008	United States' response to NEDC's notice of supplemental authority
59	08/14/2008	Industry appellees' and intervenor-appellees' response to NEDC's notice of supplemental authority
64	10/31/2008	Order granting NRDC and EPIC motion for leave to file amicus brief

NO.	DATE	DESCRIPTION
68	11/19/2008	Argued and submitted to William A. Fletcher, Raymond C. Fisher, and Charles Breyer
69	11/24/2008	Intervenor-appellee AFPA's letter to court of appeals panel re: response to question at oral argument
73	08/17/2010	Filed Opinion: Reversed and Remanded
88	10/05/2010	Defendants-Appellees Timber Companies' Petition for Panel Rehearing and Rehearing En Banc
89	10/05/2010	Defendants-Appellees State of Oregon's Petition for Panel Rehearing and Rehearing En Banc
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NO.	DATE	DESCRIPTION
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111	12/13/2010	Plaintiff-Appellant's Response to Petition for Panel Rehearing and Rehearing En Banc
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126	02/11/2011	Amicus Curiae brief of the United States
127	05/10/2011	Order granting Wildlands CPR and EPIC motion to file amicus brief and denying accompanying request for judicial notice
128	05/11/2011	Amicus Curiae CPR and EPIC brief
129	05/17/2011	Order and Opinion withdrawing and replacing prior opinion, denying petitions for rehearing and rehearing en banc

NO.	DATE	DESCRIPTION
131	06/02/2011	NEDC response to industry motion to stay the mandate
132	06/03/2011	Order denying motion to stay mandate
134	06/14/2011	Order denying motion to reconsider stay of mandate

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

No. 07-35266

NORTHWEST ENVIRONMENTAL DEFENSE CENTER,

Plaintiffs-Appellants,

v.

MARVIN BROWN, Oregon State Forester, in his official capacity; STEPHEN HOBBS, BARBARA CRAIG, DIANE SNYDER, LARRY GIUSTINA, CHRIS HEFFERNAN, WILLIAM HUTCHISON, AND JENNIFER PHILLIPPI, members of the Oregon Board of Forestry, in their official capacities; HAMPTON TREE FARMS, INC.; STIMSON LUMBER CO.; GEORGIA-PACIFIC WEST, INC.; and SWANSON GROUP, INC.,

Defendant-Appellees, and

OREGON FOREST INDUSTRIES COUNCIL; AMERICAN FOREST AND PAPER ASSOCIATION; and TILLAMOOK COUNTY, Intervenor-Appellees.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF OREGON, Civ. No. 06-1270-KI

***AMICUS CURIAE* BRIEF OF THE UNITED STATES OF AMERICA**

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GLOSSARY

AMC	*American Mining Congress v. EPA*, 965 F.2d 759 (9th Cir. 1992)
Chevron	*Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984)
CWA	Clean Water Act
EDC	*Environmental Def. Ctr v. EPA*, 344 F.3d 832 (9th Cir. 2003)
EPA	Environmental Protection Agency
EPIC	*Environmental Protection Info. Center v. Pacific Lumber Co.*, 2003 WL 24550681 (N.D. Cal. 2003)
Forsgren	*League of Wilderness Defenders v. Forsgren*, 309 F.3d 1181 (9th Cir. 2002)
Hammersley	*Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res.*, 299 F.3d 1007 (9th Cir. 2002)
Large MS4	Municipal separate storm sewer system serving a population of 250,000 or more
Medium MS4	Municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000
MS4	Municipal separate storm sewer systems
NPDES	National Pollutant Discharge Elimination System
SIC code	Standard Industrial Classification Code

Small MS4	Municipal separate storm sewer systems serving under 100,000

Pursuant to Federal Rule of Appellate Procedure 29(a), the United States of America respectfully submits this brief as *amicus curiae*.

INTEREST OF THE UNITED STATES

Congress entrusted the United States Environmental Protection Agency ("EPA") to oversee the National Pollutant Discharge Elimination System ("NPDES") created by section 402 of the Clean Water Act ("CWA"), 33 U.S.C. § 1342. EPA has a strong interest in this case because it involves the interpretation of the agency's NPDES regulations at 40 C.F.R. §§ 122.27 and 122.26. The United States thus files this brief as *amicus curiae* to explain that natural runoff from forest roads is not subject to the NPDES program under these regulations.

STATEMENT OF THE ISSUES

The issues presented in this appeal are: (1) whether EPA's silvicultural rule, found at 40 C.F.R. § 122.27, is properly read to define stormwater runoff associated with forest roads as "nonpoint sources," which do not require NPDES permits; and (2) assuming *arguendo* that there could be "point source" discharges associated with forest roads, whether EPA's definition of stormwater discharge "associated with industrial activity," found at 40 C.F.R. §122.26(b)(14), is properly read to exclude logging and forest roads, and thus does not subject stormwater associated with forest roads to the NPDES program?

STATEMENT OF THE CASE

A. Statutory and Regulatory Background

The CWA is a comprehensive statute to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). CWA section 301(a) prohibits the "discharge of any

pollutant" by any person from a "point source" into waters of the United States, except in compliance with certain enumerated provisions, including section 402. *See* 33 U.S.C. §§ 1311(a), 1342. Section 502(12) defines the term "discharge of a pollutant" to mean any addition of any pollutant to a navigable water from any "point source," 33 U.S.C. § 1362(12). Section 502(14) defines the term "point source" as:

> any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, [or] discrete fissure . . . from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

33 U.S.C. § 1362(14). Sources of pollution that are not "point sources" are "nonpoint sources." *See Oregon Natural Resources Council v. U.S. Forest Service*, 834 F.2d 842, 849 n.9 (9th Cir. 1987).

CWA section 402, enacted in 1972, created the NPDES program to regulate point source discharges. *See* 33 U.S.C. § 1342. In 1987 Congress added CWA section 402(p), which required EPA to establish a program to address certain point source discharges composed entirely of stormwater. *See* 33 U.S.C, § 1342(p). As explained in more detail below, stormwater point sources that are not covered by EPA's stormwater rules are not subject to the NPDES program.

Unlike point sources, nonpoint sources are not (and never were) regulated under section 402, but are addressed through other programs. For example, section 208 creates an "areawide waste treatment management" program to address "areas with substantial water quality control problems[.]" 33 U.S.C.

§ 1288(a). The section 208 program authorizes EPA to "identify, if appropriate, agriculturally and silviculturally related nonpoint sources of pollution" within such areas. 33 U.S.C. § 1288(b)(2)(F). Section 304(f) requires EPA to issue "(1) guidelines for identifying and evaluating ... nonpoint sources of pollutants, and (2) processes, procedures, and methods to control pollution resulting from—(A) agricultural and silvicultural activities, including runoff from fields and crops and forest lands. . . ." 33 U.S.C. § 1314(f). Section 319 authorizes a federal grant program to address nonpoint sources. *See* 33 U.S.C. § 1329.

1. EPA's Silvicultural Rule

In 1973 EPA promulgated a rule exempting silvicultural point source discharges of stormwater from the NPDES program. 38 Fed. Reg. 18,000, 18,004 (July 5, 1973) (codified at 40 C.F.R. § 125.4(f)). The District Court for the District of Columbia overturned this rule in 1975. *See NRDC v. Train*, 396 F. Supp. 1393, 1395 (D. D.C. 1975). In upholding that decision, the court of appeals explained that, if a source is defined as a point source, it is illegal unless authorized by permit.[1] *See NRDC v. Costle*, 568 F.2d 1369 (D.C. Cir. 1977). The court acknowledged, however, that EPA has authority to exclude some sources from the definition of "point source" by interpretation. *Id.* at 1378.

In 1976 EPA adopted a rule defining four categories of silvicultural activities as point sources. In this rule, EPA also explained that silvicultural nonpoint sources include "road construction and maintenance

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[1] This decision reflected the CWA before Congress added section 402(p) in 1987.

from which runoff results from precipitation events." 40 C.F.R. §125.54 (1976). In 1980 EPA slightly amended the silvicultural rule, which still defines only four categories of silvicultural point sources, to read as follows:

> Silvicultural point source means any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. *The term does not include non-point source silvicultural activities such as . . . harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff.*

40 C.F.R. § 122.27(b) (emphasis added). EPA has consistently interpreted this rule to define all precipitation-driven runoff from the listed nonpoint sources as not subject to the NPDES program.

In proposing the rule in 1976, EPA explained that most pollution related to silvicultural activities is "basically runoff induced by precipitation events and is not and should not be subject to the [NPDES program]." 41 Fed. Reg. 6281, 6282 (Feb. 12, 1976). In 1995 EPA further explained that the silvicultural rule's exclusion of runoff from harvesting operations includes "initial transport of forest products from an active harvest site." 60 Fed. Reg. 50,804, 50,835 (Sept. 29, 1995).

In 1999 EPA reiterated this interpretation of the silvicultural rule when it sought public comment on a proposal to modify the rule to allow for case-by-case regulation of silvicultural stormwater sources as

point sources where appropriate. In proposing this amendment, EPA explained that runoff from the listed nonpoint source activities in the current rule is "*categorically excluded* from the NPDES program." 64 Fed. Reg. 46058, 46077 (Aug. 23, 1999) (emphasis added).[2]

2. CWA Section 402(p)

In 1987 Congress added CWA section 402(p), establishing a program to address stormwater point sources, including through the staged permitting of appropriate sources. *See* 33 U.S.C. § 1342(p). Sections 402(p)(1) and 402(p)(2) prohibited EPA from requiring NPDES permits for discharges "composed entirely of stormwater" until October 1, 1994, except for five categories of so-called "phase I" stormwater point sources. The five classes of "phase I" sources are: (1) discharges for which an NPDES permit had been issued before February 4, 1987; (2) discharges associated with industrial activity; (3) discharges from a municipal separate storm sewer system ("MS4") serving a population of 250,000 or more ("large MS4"); (4) discharges from an MS4 serving a population of 100,000 or more but less than 250,000 ("medium MS4"); and (5) a discharge which contributes to a violation of a water quality standard or is a significant contributor of pollutants. *See* 33 U.S.C. § 1342(p)(2). None of these categories include logging or forest roads. Section 402(p)(3) provided that NPDES permits are required for these phase I stormwater discharges, and section 402(p)(4) directed EPA to promulgate regulations governing them.

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[2] After considering public comments, EPA decided not to adopt this proposal. *See* 65 Fed. Reg. 43,586, 43,652 (July 13, 2000).

With respect to those stormwater discharges not included in phase I, section 402(p)(5) required EPA to conduct a study to identify these sources, and establish "procedures and methods to control stormwater discharges to the extent necessary to mitigate impacts on water quality." 33 U.S.C. § 1342(p)(5)(B) & (C). Section 402(p)(6) then required EPA to designate the so-called "phase II" sources for regulation. 33 U.S.C. § 1342(p)(6).

In summary, section 402(p) establishes a two-phase permitting scheme for stormwater point source discharges and delegates to EPA the authority to promulgate rules to implement these requirements. Point source discharges composed entirely of stormwater from sources not designated for regulation under EPA's stormwater rules are not subject to the NPDES program. *See Conservation Law Found. v. Hannaford Bros. Co.*, 327 F. Supp. 2d 325, 328 (D. Vt. 2004), *aff'd*, 139 Fed. Appx. 338 (2d Cir. 2005).

3. EPA's Stormwater Rules

EPA adopted its phase I stormwater rule in 1990. This Court largely upheld the phase I rule. *See American Mining Congress v. EPA*, 965 F.2d 759 (9th Cir. 1992) ("*AMC*"); *NRDC v. EPA*, 966 F.2d 1292 (9th Cir. 1992). The rule includes an extensive definition of the term stormwater discharge "associated with industrial activity." *See* 55 Fed. Reg. 47,990 (Nov. 16, 1990). The definition references numerous Standard Industrial Classification codes ("SIC codes"), including SIC code 24, which includes the code for "logging" (SIC code 2411). *See* OMB, Standard Industrial Classification Code Manual, 107 (1987).

Despite the indirect reference to the SIC code for "logging," the definition states that it "does not in-

clude discharges from the facilities or activities excluded from the NPDES program under this part 122." 40 C.F.R. § 122.26(b)(14). This reference includes EPA's silvicultural rule, which is contained in part 122. Thus, the reference to SIC code 2411 only covers silvicultural stormwater discharges from the four categories of facilities defined as point sources in the silvicultural rule described *supra*: rock crushing, gravel washing, log sorting and log storage facilities. To remove any doubt, EPA expressly explained in the preamble that: "EPA does not intend to change the scope of 40 CFR 122.27 in this rulemaking. Accordingly, the definition of 'storm water discharge associated with industrial activity' does not include sources that may be included under SIC 24, but which are excluded under 40 CFR 122.27." 55 Fed. Reg. at 48,011.

EPA adopted its phase II stormwater rule in 1999, designating two additional categories of stormwater discharges for regulation,[3] and retaining the authority to designate stormwater point sources for regulation on a case-by-case basis. *See* 64 Fed. Reg. 68,722 (Dec. 8, 1999). In *Environmental Def. Ctr. v. EPA*, 344 F.3d 832 (9th Cir. 2003) ("*EDC*"), this Court upheld EPA's phase II rule in most respects. As relevant here, this Court found that, in promulgating the phase II rule, EPA had not responded adequately to comments asserting that EPA should require NPDES permits for stormwater discharges from forest roads under section 402(p)(6).[4]

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[3] These two categories are: (1) certain small MS4s; and (2) construction sites disturbing one to five acres.

[4] The court also remanded "three aspects of the Rule concerning the issuance of notices of intent under the Rule's general permitting scheme." *EDC*, 344 F.3d at 840.

Id. at 861. This Court thus remanded the rule to EPA for a further explanation of its decision. Pursuant to this remand, EPA is currently assessing the options for addressing runoff from forest roads consistent with section 402(p)(5)-(6).

B. Procedural History

In the district court, Plaintiff Northwest Environmental Defense Center ("NEDC") filed a CWA citizen suit alleging that Oregon officials and private timber companies violated the CWA by discharging pollutants from "point sources" associated with two roads in the Tillamook State Forest without NPDES permits. (Complaint, NEDC ER 20-25, ¶¶ 83 to 92.) Defendants, supported by the United States as *amicus curiae*, moved to dismiss the complaint for failure to state a claim. The district court granted these motions and dismissed the action on March 1, 2007. (Judgment, NEDC ER 67, at 140.) The United States incorporates by reference the further discussion of the district court proceedings in the reply brief submitted by private industry defendants-appellees. Reply Br. of Hampton Tree Farms, Inc. et al. 5-9.

SUMMARY OF ARGUMENT

Under the CWA, all sources of water pollution are either "point sources" or "nonpoint sources." Nonpoint sources are not subject to the NPDES permitting requirements.

Stormwater runoff from forest roads is a nonpoint source under EPA's silvicultural rule. Courts have long recognized that Congress authorized EPA to distinguish between point and nonpoint sources. For over thirty years, EPA has exercised this authority to define "harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff"—i.e. runoff resulting

from precipitation events—as nonpoint sources. This rule categorically defines stormwater runoff from forest roads and harvesting activities as nonpoint sources. Stormwater runoff from these sources is not subject to the NPDES program even if it flows through a ditch, channel, or culvert. Thus the district court correctly held that runoff from these forest roads is a nonpoint source, which does not require an NPDES permit.

But even if this Court were to find that some forest road runoff might constitute a point source, any stormwater point source discharges from forest roads are not subject to NPDES permitting under CWA section 402(p) and EPA's stormwater rules. EPA's stormwater rules do not regulate logging or forest roads. In fact, the phase I stormwater rule expressly excludes from coverage all "facilities or activities excluded from the NPDES program" elsewhere within 40 C.F.R. part 122. This reference encompasses EPA's silvicultural rule, which is codified in part 122.

ARGUMENT

I. STANDARD OF REVIEW

This Court reviews *de novo* the district court's dismissal for failure to state a claim. *See Knievel v. ESPN*, 393 F.3d 1068, 1072 (9th Cir. 2005). Where Congress either implicitly or explicitly delegates authority to an agency to fill a gap left in a statute, the agency's construction is entitled to deference as long as it is a reasonable one. *See United States v. Mead Corp.*, 533 U.S. 218, 226-30 (2001) (citing *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842-843 (1984) ("*Chevron*")). An agency's construction of its regulation is entitled to deference unless "plainly erroneous or inconsistent

with the regulation." *Auer v. Robbins*, 519 U.S. 452, 461 (1997).

II. FOR OVER THIRTY YEARS, EPA'S SILVICULTURAL RULE HAS REASONABLY DEFINED PRECIPITATION-DRIVEN RUNOFF FROM FOREST ROADS AS A NONPOINT SOURCE.

NEDC argues that stormwater runoff from forest roads is a statutorily defined point source where that runoff flows through pipes, ditches, or channels. NEDC Br. 24-31. This argument both lacks merit and constitutes an improper challenge that cannot be brought in this action.

A. NEDC Cannot Challenge EPA's Longstanding Silvicultural Rule at this Time.

Although NEDC couches its challenge in terms of the CWA's definition of "point source," NEDC's appeal is actually an improper challenge to EPA's definition of silvicultural nonpoint sources in 40 C.F.R. § 122.27. NEDC, having not challenged the silvicultural rule within the time frame provided by the statute, cannot now challenge the rule some thirty years later. CWA section 509(b)(1)—and not the citizen suit provision at 505(a)—provides for challenges to final EPA actions, including promulgation of "any effluent limitation or other limitation under section 1311." 33 U.S.C. § 1369(b)(1). Moreover, section 509(b)(2) expressly provides that agency action reviewable under 509(b)(1) "shall not be subject to judicial review in any civil or criminal proceeding for enforcement." 33 U.S.C. § 1369(b)(2).

It is well established that section 509(b)(1) provides the exclusive mechanism for challenging EPA

rules excluding sources from the NPDES program. *See, EDC*, 344 F.3d at 843; *AMC*, 965 F.3d at 763, 767-68. Such challenges must be brought in the appropriate circuit court within 120 days of promulgation, "or after such date only if such application is based solely on grounds which arose after such 120th day." *Id.* NEDC's challenge to the silvicultural rule is decades too late. NEDC did not bring such a challenge to the silvicultural rule within the time frame provided by the CWA and may not do so now in this citizen enforcement action. EPA adopted the current version of the rule in 1980, *see* 45 Fed. Reg. 33,290, 33,446-47 (May 19, 1980), and NEDC's challenge, which argues that the rule is inconsistent with the statute's definition of the term "point source," is not based on grounds that have arisen since the expiration of the period during which the rule was subject to challenge. Thus, this Court should reject NEDC's attempt to resurrect a time-barred challenge in the context of this citizen suit. *See Chevron U.S.A., Inc. v. U.S. EPA*, 908 F.2d 468, 471 (9th Cir. 1990).

B. EPA's Silvicultural Rule is Entitled to Deference.

Should this Court nevertheless consider NEDC's improper and untimely challenge, this Court should defer to EPA's reasonable interpretation of the CWA to not require regulation of stormwater runoff from forest roads as point sources.

The two-step test set forth in *Chevron*, 467 U.S. 837, governs the review of an agency's interpretation of a statute in circumstances like these, where the agency interpretation is promulgated in an exercise of delegated authority. *See Mead Corp.*, 533 U.S. at 226-27. First, if "Congress has directly spoken to the precise question at issue," the agency must effectuate

Congress' express intent. *Chevron*, 467 U.S. at 842. Under step one of *Chevron*, the Court looks to the language of the statute, as well as its context, structure, legislative history, and purpose. *See Shays v. Federal Election Com'n*, 414 F.3d 76, 105 (D.C. Cir. 2005).

Second, if the statute is "silent or ambiguous with respect to the specific issue," the Court should defer to the agency's interpretation if it is reasonable. *Chevron*, 467 U.S. at 843. Under *Chevron* step two, an agency may "advance a legal argument in support of its administrative position which bolsters rather than duplicates the consistent position upon which its decision was made below." *See America's Community Bankers v. FDIC*, 200 F.3d 822, 836 (D.C. Cir. 2000).

In this case, the CWA's definition of the term point source, as well as its treatment of silvicultural sources, is sufficiently ambiguous to constitute an implicit delegation of authority to EPA under *Chevron* step two. *See Mead Corp.*, 533 U.S. at 227-229 (explaining concept of implicit delegation, and that the court is to defer to the agency unless its rule is "manifestly contrary to the statute") (citing *Chevron*, 467 U.S. at 842-43).

1. The CWA's Definition of the Term "Point Source" is Ambiguous.

The ambiguity in the CWA's definition of the term "point source" is, in large part, found in its over-breadth. The statutory definition includes "any pipe, ditch [or] channel . . . from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). But Congress could not have meant that all drainage that happens to flow through a pipe or ditch is always and inevitably subject to regulation as a statu-

torily-defined point source. For example, the definition should not be read so broadly as to encompass pollutants washed into a covered water by precipitation through rain gutters on a home, or through a ditch or pipe in a homeowner's backyard. Under NEDC's construction of the term point source, even hikers contributing to the erosion of sediment from footpaths in designated wilderness areas could be point sources. Such a *reductio ad absurdum* of the definition of the term "point source" cannot be what Congress intended. Thus, by virtue of its overbreadth, the point source definition is ambiguous. Furthermore, when the definition of point source is read in concert with CWA section 402(p), where Congress made it clear that EPA has tremendous discretion in determining what stormwater runoff will require an NPDES permit, this ambiguity is self-evident.

The ambiguity in the statutory definition is further underscored when the definition is read together with those CWA sections which specifically speak to silvicultural sources. As already noted, the CWA elsewhere refers to silvicultural activities as generating nonpoint sources. *See, e.g.*, 33 U.S.C. § 1288(b)(2)(F) (referring to "agriculturally and silviculturally related nonpoint sources of pollution"); 33 U.S.C. § 1314(f). Thus the definition of point source in section 502(14) is ambiguous.

Indeed, the circuit courts have also found that the statute is sufficiently ambiguous that EPA has authority to define the line between point and nonpoint sources. Most recently, in *League of Wilderness Defenders v. Forsgren*, 309 F.3d 1181 (9th Cir. 2002) ("*Forsgren*"), this Court noted that "EPA has some power to define point source and nonpoint source pollution *where there is room for reasonable interpreta-*

tion of the statutory definition." *Id.* at 1190 (emphasis in original). Likewise, the D.C. Circuit explained that the definition of point source, "including the concept of a 'discrete conveyance,' suggests that there is room here for some exclusion by interpretation." *NRDC v. Costle*, 568 F.2d at 1377.[5] Also, in *National Wildlife Fed'n v. Gorsuch*, 693 F.2d 156 (D.C. Cir. 1982), the court deferred to EPA's decision not to require NPDES permits for discharges from dams. The court noted that Congress meant for EPA to have "at least some power" to define the term point source, *id.* at 167, and found that it could not conclude "that the Act requires EPA to adopt the strictest possible regulatory solution." *Id.* at 183. These cases all found ambiguity in the statutory definition of point source. Thus, should this Court entertain NEDC's argument that the silvicultural rule is inconsistent with the statutory definition,[6] the only question before this court is whether EPA's interpretation of the CWA to not require regulation of stormwater runoff from forest roads is reasonable.

2. EPA's Definition of Forest Roads as a Nonpoint Source is Reasonable.

EPA's definition of most silvicultural activities as generating only nonpoint sources is a reasonable construction of the CWA. Contemporaneous with its promulgation of the silvicultural rule, EPA explained

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[5] In the district court opinion upheld in *Costle*, the district court noted that the plaintiff did "not contend that every farm ditch, water bar, *or culvert on a logging road* is properly meant to be a point source under the Act." *NRDC v. Train*, 396 F. Supp. at 1401 (emphasis added).

[6] Of course, as noted *supra*, this challenge to EPA's silvicultural rule is untimely and improper in this litigation.

that the silvicultural sources EPA identified as non-point sources meet the following three criteria:

> (i) The pollutants discharged are induced by natural processes, including precipitation, seepage, percolation, and runoff; (ii) The pollutants discharged are not traceable to any discrete or identifiable facility; and (iii) The pollutants discharged are better controlled through the utilization of best management practices, including process and planning techniques.

41 Fed. Reg. 24,709, 24,710 (June 18, 1976). All three of these criteria apply to stormwater runoff from forest roads. First, runoff from these roads is induced by natural processes—namely, precipitation events. Second, forest roads are not discrete or identifiable facilities. In fact, the forest roads at issue in this case are public roads used largely for recreational purposes. Third, in adopting the silvicultural rule, EPA found that stormwater runoff from forest roads is best addressed by the states. *See* 41 Fed. Reg. at 24,710 ("EPA recognizes that numerous forest practices acts, State environmental programs, and local ordinances are excellent sources of effective regulation and does not intend to disrupt or supplant such regulation."); *see also* Oregon State Appellees' Br. 7-11 (discussing Oregon's regulation of forest roads).

Deference to EPA's reasonable reading of the statute is also appropriate here because EPA has "consistently followed" this interpretation of the CWA for over thirty years. *A&W Smelter and Refiners v. Clinton*, 146 F.3d 1107, 1112 (9th Cir. 1998); *McCoog v. Hegstrom*, 690 F.2d 1280, 1284 (9th Cir. 1982). As discussed *supra*, since 1976 EPA has consistently interpreted the silvicultural rule to categorically ex-

clude runoff from the listed categories of silvicultural nonpoint sources. While EPA considered changing course in 1999, the agency ultimately elected not to do so.

Moreover, deference to EPA in this case is consistent with this Court's decisions in other CWA cases. *See Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res.*, 299 F.3d 1007, 1018-1019 (9th Cir. 2002) ("*Hammersley*") (deferring to an EPA rule defining a mussel farm as a nonpoint source, and noting that a contrary determination would improperly "undermine the agency's interpretation of the Clean Water Act"); *see also San Francisco Baykeeper v. Cargill Salt Div.*, 481 F.3d 700, 704-705 (9th. Cir. 2007) (deferring to the regulatory definition of the CWA term "waters of the United States").

Furthermore, although aware of EPA's regulatory definition for more than thirty years, Congress has not altered the CWA's regulation of silvicultural activities since EPA adopted the silvicultural rule in 1976. While Congress has amended the CWA to modify the regulation of other activities—including by adding section 402(p) addressing stormwater sources—it did not repeal the silvicultural rule. As the Supreme Court has explained, "when Congress revisits a statute giving rise to a longstanding administrative interpretation without pertinent change, the congressional failure to revise or repeal the agency's interpretation is persuasive evidence that the interpretation is the one intended by Congress." *Commodity Futures Trading Comm'n v. Schor*, 478 U.S. 833, 846 (1986); *see also FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 156 (2000) (finding that "Congress' tobacco-specific legislation has effectively ratified the FDA's previous position that it lacks jurisdiction to regulate tobac-

co"); *Bunker Hill Co. v. EPA*, 658 F.2d 1280, 1284 n.2 (9th Cir. 1981) (deferring to an EPA rule where Congress "made no effort to indicate any disagreement with EPA's construction" of the statute and did not "take advantage of an opportunity to alter it").

Here, if Congress had disagreed with EPA's interpretation, or had intended to take away EPA's discretion to elect not to regulate stormwater from forest roads, it would have said so in 1987 when it enacted section 402(p). Instead, when Congress enacted section 402(p) it did not include logging or forest roads within the five categories of phase I stormwater point sources that must be permitted under the NPDES program.

III. THE DISTRICT COURT CORRECTLY HELD THAT RUNOFF FROM FOREST ROADS IS A NONPOINT SOURCE.

A. The District Court Correctly Applied *Forsgren*.

Much of NEDC' s argument is predicated on its misreading of this Court's decision in *Forsgren*, 309 F.3d 1181. *See* NEDC Br. 25-28. As noted above, *Forsgren* held that the statutory definition of point source in CWA section 502(14) "clearly encompasses an aircraft . . . spraying pesticide . . . directly over covered waters."[7] 309 F.3d at 1185. In reaching this conclusion, the Court explained that "silvicultural pest control *from which there is natural runoff* would be an example of a 'nonpoint source silvicultural' ac-

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[7] In *Forsgren* this Court did not consider whether the pesticides were pollutants, because it assumed that the parties agreed that they were. *See* 309 F.3d at 1184 n.2. In fact the United States expressly reserved its argument on that issue in its brief to the district court.

tivity not included in the term 'point source.'" *Id.* Thus, under *Forsgren*, "natural runoff" from "construction and maintenance" of forest roads is likewise a nonpoint source.

NEDC nevertheless asks this Court to disregard the silvicultural rule, arguing that *Forsgren* rendered the statutory definition of the term point source "controlling" here. NEDC Br. 25-29. But *Forsgren* did not displace EPA's silvicultural rule. The *Forsgren* Court merely found that the rule's definition of nonpoint sources did not apply in the very different factual setting of pesticides discharged from an airplane directly over covered waters. The *Forsgren* Court read the phrase "from which there is natural runoff" to modify all the nonpoint source activities listed in the second sentence of the regulation. 309 F.3d at 1186. Having read the silvicultural rule's list of nonpoint sources to only reach various categories of "natural runoff," the Court inevitably proceeded to find that discharges of pesticides from an airplane are point sources. Such discharges are obviously not "natural runoff," but result from human action taken from a discrete facility—an airplane. Unlike in *Forsgren*, this case involves precipitation eroding sediment and washing it into waters—in other words, "natural runoff." Thus, the district court properly applied the silvicultural rule, as explicated in *Forsgren*, to the facts of this case.[8]

NEDC's argument that forest roads involve point sources is also inconsistent with multiple cases de-

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[8] NEDC also misreads the district court opinion to suggest that *Forsgren* created a "new test" for distinguishing point sources from nonpoint sources. *See* NEDC Br. 31-34. The district court did not apply a new test, but merely applied EPA's rules to the facts of this case. (Opinion, NEDC ER 66, at 129-134.)

cided by this Court noting that timber harvesting generates only nonpoint source pollution. For example, in *Pronsolino v. Nastri*, 291 F.3d 1123, 1126 (9th Cir. 2002), this Court upheld a CWA study addressing sedimentation from silvicultural activities—which EPA considered to stem exclusively from nonpoint sources. This Court again recently noted that an example "of a non-discrete source is runoff from a farmland or timber harvesting." *Friends of Pinto Creek v. EPA*, — F.3d —, 2007 WL 2874335, *3 (9th Cir. 2007); *see also Oregon Natural Resources Council*, 834 F.2d at 849 (noting that the timber harvesting activities at issue were nonpoint sources); *Oregon Natural Desert Ass'n v. Dombeck*, 172 F.3d 1092, 1098 (9th Cir. 1998) (noting that "examples of nonpoint source pollution include . . . silvicultural activities").

B. Stormwater from Forest Roads is "Natural Runoff" Under EPA's Silvicultural Rule.

NEDC also argues that channeled conveyances from forest roads must be point sources because the term "natural runoff" in EPA's silvicultural rule does not include stormwater when it flows through "man-made" ditches, channels, and culverts. NEDC Br. 37-40. This reading conflicts with EPA's interpretation of its rule. It is EPA's interpretation of its rule—and not NEDC's—that is entitled to substantial deference. *See Auer*, 519 U.S. at 461.

EPA has consistently interpreted the term "natural runoff" as synonymous with all "runoff from precipitation events." In 1980 EPA replaced the language from its 1976 rule, "from which runoff results from precipitation events," with the shorthand "from which there is natural runoff" without comment. 45

Fed. Reg. 33,290, 33,447 (May 19, 1980). EPA's substitution of these terms did not substantively change the rule. *See generally*, *Maine v. Thiboutot*, 448 U.S. 1, 17 n.4 (1980) (noting that a proposed minor revision to a statute, without comment, provided "strong evidence that the revisers intended no substantive change"). EPA intended the term "natural runoff" to continue to encompass all runoff from precipitation events. Had EPA intended a more limited use of the term "natural runoff," the agency would have said so in the preamble.

Just as EPA's construction of the CWA is entitled to deference under *Chevron*, EPA's construction of its own rule is entitled to deference where it is neither "plainly erroneous" nor "inconsistent with the regulation." *Auer*, 519 U.S. at 461 (deferring to the Department of Labor's interpretation of its regulations as contained in an *amicus* brief); *see also Thomas Jefferson Univ. v. Shalala*, 512 U.S. 504, 512-13 (1994); *Udall v. Tallman*, 380 U.S. 1, 16 (1965); *Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945). This general rule of substantial deference is further reinforced where an agency applies its expertise to interpret complex regulations, such as those EPA has promulgated to administer the CWA. *See Ford Motor Credit Co. v. Milhollin*, 444 U.S. 555, 566 n.9 (1980) (stating that deference to an agency's interpretation of regulations is rooted in respect for agency expertise in the area).

NEDC nevertheless presents several incorrect arguments that the meaning of the term "natural runoff" in EPA's silvicultural rule only reaches diffuse sources of runoff. NEDC Br. 36-50. First, citing to this Court's recent decision in *Northern California River Watch v. Healdsburg*, 496 F.3d 993 (9th Cir. 2007), NEDC argues that this Court must construe

EPA's silvicultural rule narrowly to achieve the purposes of the CWA. NEDC Br. 23, 35 (citing *Healdsburg*, 496 F.3d at 1001). *Healdsburg*, however, addressed the extent of federal jurisdiction over "waters of the United States," not the extent to which stormwater sources are regulated under the NPDES program. Moreover, by adding CWA section 402(p), Congress left no doubt that EPA need not require all stormwater point sources to secure NPDES permits.

In another attempt to alter the meaning of the silvicultural rule, NEDC tries to redefine the term "runoff" to refer only to diffuse sources by stringing together dicta from several cases, including this Court's opinion in *EDC*. NEDC Br. 37-40. Thus, NEDC suggests that the term "runoff" does not apply to water that passes through a ditch or culvert. However, as illustrated by a proper reading of *EDC* itself, the term "runoff" is not inherently limited to stormwater that is in no way channelized. *See EDC*, 344 F.3d at 869 (referring to stormwater point sources that EPA chose to regulate as "runoff"). EPA has made it clear that the term "natural runoff" in the silvicultural rule categorically excludes all stormwater runoff from forest roads, even where the roads include channels, ditches, or culverts.

The cases cited by NEDC that address mining activities, NEDC Br. 40-42, which purportedly support its distinction between "natural" runoff and runoff through "man-made" conveyances, are simply inapposite. Unlike silviculture, EPA expressly defines mining as "industrial activity" subject to the NPDES program. *See* 40 C.F.R. § 122.26(b)(14)(iii).

NEDC also draws an analogy between the natural runoff at issue here and small MS4s, some of which are regulated under EPA's phase II stormwa-

ter rule. NEDC Br. 48-50. However, ditches, channels, and culverts on forest roads are simply not regulated small MS4s under EPA's stormwater rules. *See, e.g.*, 40 C.F.R. §§ 122.26(b)(8), 122.26(b)(16), 122.32.

Finally, NEDC wrongly relies on two district court cases. First, NEDC cites an unpublished opinion in *Environmental Protection Info. Ctr. v. Pacific Lumber Co.*, 2003 WL 25506817, *15 (N.D. Cal. 2003) ("*EPIC*") (finding that the statutory definition of point source encompasses ditches, culverts and channels associated with forest roads). It is our position, however, that *EPIC* was wrongly decided, and the district court agreed.[9] (Opinion, NEDC ER 66, at 134.) The *EPIC* court failed to defer to EPA's construction of its rule, in conflict with *Auer*, 519 U.S. at 461, and *Hammersley*, 299 F.3d at 1018-1019. *EPIC* also conflicts with this Court's analysis in *Forsgren* and runs contrary to this Court's assertions that runoff from timber harvesting is a nonpoint source. *See, e.g., Pronsolino*, 291 F.3d at 1126.

NEDC's reliance on *North Carolina Shellfish Growers Ass'n v. Holly Ridge Assoc.*, 278 F. Supp. 2d 654, 681-683 (E.D. N.C. 2003) ("*Holly Ridge*"), is likewise misplaced. *See* NEDC Br. 47. The district court in *Holly Ridge* correctly found that a construction site disturbing more than five acres of land was an expressly-defined "industrial activity" under EPA's phase I stormwater rule that required a stormwater permit. 278 F. Supp. 2d at 679 (citing 40 C.F.R. § 122.26(b)(14)(x)). Thus, unlike in this case,

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[9] *EPIC* is stayed pending bankruptcy proceedings initiated by defendant. *EPIC*, 3:01-cv-2821 MHP (N.D. Cal. July 24, 2001). Thus, the United States has not had an opportunity to seek review of the district court's decision.

the defendants in *Holly Ridge* were discharging stormwater in direct violation of EPA regulations.

Moreover, *EPIC* and *Holly Ridge* are contradicted by persuasive authority that is directly on point. For example, in *Newton County Wildlife Ass'n v. Rogers*, 141 F.3d 803, 810 (8th Cir. 1998), the Eighth Circuit found that EPA's silvicultural rule excluded runoff from logging and road construction activities. *Accord Sierra Club v. Martin*, 71 F. Supp. 2d 1268 (N.D. Ga. 1996); see also *O 'Aha'ino v. Galiher*, 28 F. Supp. 2d 1258, 1261-1262 (D. Haw. 1998) (rejecting claims that farm access roads should be subject to NPDES permitting, and finding "no substantial difference between the harm caused by forest roads and that caused by defendant's farm roads").

In summary, EPA has reasonably and consistently construed its silvicultural rule to define stormwater from forest roads as nonpoint sources. The district court's judgment that runoff from forest roads is a nonpoint source should be affirmed. This Court need go no further to affirm the district court.

IV. EPA'S PHASE I STORMWATER RULE DOES NOT INCLUDE STORMWATER DISCHARGES FROM FOREST ROADS.

Below NEDC asserted that, despite EPA's decision in the silvicultural rule that runoff from forest roads is a nonpoint source, EPA nonetheless defined stormwater runoff from forest roads as a point source discharge "associated with industrial activity" when it promulgated the phase I stormwater rule at 40 C.F.R. § 122.26(b)(14). The district court disposed of this argument without analysis under EPA's phase I stormwater rule, because it held that runoff from forest roads is a nonpoint source. (Opinion, NEDC ER 66, at 134.) NEDC does not brief this argument

on appeal, and asks this Court to remand this issue to the district court. NEDC Br. 8.

First, this Court need not reach this issue if it agrees with EPA's reasonable interpretation that runoff from forest roads is a nonpoint source as the district court held. But even if this Court were to find to the contrary—that some of the runoff associated with forest roads is a point source—NEDC's argument that the phase I stormwater rule applies to forest roads must fail. The only silvicultural stormwater sources subject to EPA's stormwater rule are the four expressly-defined point sources in the silvicultural rule: rock crushing, gravel washing, log sorting, and log storage facilities.

NEDC's position in the district court that forest roads involve discharges "associated with industrial activity" ignores the plain language of the rule and the clear intent of EPA in promulgating the rule. First, the second sentence of the regulatory definition states that this term "does not include discharges from the facilities or activities excluded from the NPDES program under this part 122." 40 C.F.R. § 122.26(b)(14). As explained *supra*, the silvicultural rule is found in 40 C.F.R. part 122 and excludes runoff from forest roads from the NPDES program.[10]

NEDC likewise misconstrues EPA's reference to SIC code 24 in the phase I rule. EPA primarily referenced this SIC code to regulate traditional *industrial* sources such as sawmills. *See* 55 Fed. Reg. at

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[10] Even if this court were to find that EPA's silvicultural rule does not define ditches, channels and culverts associated with forest roads as a nonpoint source, EPA clearly articulated its intent to exclude these sources from the phase I stormwater rule.

48,008 (explaining in the preamble that establishments under SIC code 24 "are engaged in operating sawmills, planing mills and other mills engaged in producing lumber and wood basic materials"). By not excluding SIC code 2411 (the logging subcategory), EPA intended to reference only the four categories of silvicultural facilities it had already defined as point sources in 1976, in order to make clear that these facilities would continue to be subject to the NPDES requirements. These four categories are "rock crushing, gravel washing, log sorting, [and] log storage facilities." 40 C.F.R. § 122.27(b). SIC code 2411 includes "logs" and "saw logs"—categories which could be construed to encompass log sorting or log storage facilities. Thus, this reference to SIC code 24 ensured that the phase I stormwater rule would preserve the silvicultural rule's longstanding definition of silvicultural point and nonpoint sources.

In fact, in response to a comment raising the concern that the rule could be misread in the same way that NEDC misreads the rule, EPA explained in the preamble that: "EPA does not intend to change the scope of 40 CFR 122.27 in this rulemaking. Accordingly, the definition of 'storm water discharge associated with industrial activity' does not include sources that may be included under SIC 24, but which are excluded under 40 CFR 122.27." 55 Fed. Reg. at 48,011.

In addition, the first sentence of the definition of stormwater discharge "associated with industrial activity" limits the term to "the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant." 40 C.F.R. § 122.26(b)(14). As discussed above, EPA has not defined logging as an

industrial activity, nor are these forest roads "directly related" to "manufacturing, processing, or raw material storage areas at an industrial plant." *Id.* Not only are logging and timber hauling not industrial activities under this definition, but these public roads are also used for recreational and other purposes that are indisputably not "industrial" in nature.

Moreover, the procedural posture of EPA's phase II stormwater rule provides further support that the phase I rule does not cover forest roads. EPA adopted the phase II rule on December 8, 1999. *See* 64 Fed. Reg. 68,722. One question raised in direct challenge to the phase II rule was whether EPA should have exercised its discretion to regulate forest roads. In response to this argument, this Court in *EDC* remanded the rule to EPA to determine whether section 402(p)(6) "requires EPA to regulate forest roads." *EDC*, 344 F.3d at 863. If forest roads were already covered by the phase I stormwater rule, this remand of EPA's phase II rule would have been unnecessary, because forest road sources would have already been subject to the NPDES permitting requirements.

Finally, because this very question remains pending before EPA, it would be inappropriate for this Court to pre-judge EPA's conclusion regarding the *EDC* remand without the benefit of a final decision on the phase II rule supported by an administrative record. Thus, any challenge to EPA's discretion to chose not to regulate forest roads under the phase I stormwater rule is simply not ripe at this time. Meanwhile, any such challenge is also time-barred under CWA section 509(b). 33 U.S.C. § 1369(b). NEDC did not challenge EPA's phase I

stormwater rule in the statutory time frame and cannot now collaterally attack the rule.

CONCLUSION

For the forgoing reasons, this Court should affirm the district court's judgment dismissing this CWA citizen suit.

Respectfully submitted,

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IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

No. 07-35266
(Panel: William A. Fletcher, Raymond C. Fisher, Charles R. Breyer)

NORTHWEST ENVIRONMENTAL DEFENSE CENTER,

Plaintiff-Appellant

v.

MARVIN BROWN, *et al.*,

Defendant-Appellees

and

OREGON FOREST INDUSTRIES COUNCIL, *et al.*,
Intervenor-Appellees

ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF OREGON,
Civ. No. 06-1270-KI

AMICUS CURIAE BRIEF OF THE UNITED STATES RESPONDING TO THE COURT'S QUESTIONS OF OCTOBER 21, 2010

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STATEMENT OF INTEREST

Pursuant to Federal Rule of Appellate Procedure 29(a), the United States of America respectfully submits this brief as *amicus curiae*, responding to the two questions posed by the Court in its October 21, 2010 order regarding jurisdictional provisions of the Clean Water Act ("CWA"), 33 U.S.C. §§ 1251-1387, and their applicability to the issues in this case.

Congress entrusted the United States Environmental Protection Agency ("EPA") with the responsibility of implementing the CWA. That responsibility includes promulgating regulations regarding the National Pollutant Discharge Elimination System ("NPDES") created by Section 402 of the CWA, 33 U.S.C. § 1342. The United States has an interest in the proper interpretation of the provisions of the CWA that provide for judicial review of specified agency actions. The United States also has an interest in the proper application of the citizen suit provision of the CWA, 33 U.S.C. § 1365, which is an important supplement to EPA's and the States' CWA enforcement authority.

SUMMARY

This case involves a CWA citizen suit brought by the Northwest Environmental Defense Center ("NEDC") against the Oregon State Forester and the Board of Forestry (the "State") as well as private companies engaged in logging operations (the "private defendants"), alleging that the defendants were facilitating discharges without a permit from two specific roads in the Tillamook State Forest, in violation of the CWA and applicable regulations. The district court dismissed the case, finding that discharges of stormwater from the forest roads at issue were excluded from CWA permitting requirements

by effect of EPA's interpretation of its silvicultural point source regulation at 40 C.F.R. § 122.27 ("Silvicultural Rule"). A panel of this Court reversed. *Northwest Envtl. Def. Ctr. v. Brown*, 617 F.3d 1176 (9th Cir. 2010). Recognizing that the Silvicultural Rule is open to at least two possible interpretations (i.e., that the rule is ambiguous), the panel concluded that under either reading, stormwater runoff from logging roads that has been collected by and then discharged from a system of man-made ditches, culverts, and channels—as NEDC alleges—is not exempt from the CWA's definition of point source. *Id.* at 1191.

The panel then considered whether, even if such discharges are from point sources within the meaning of the CWA, the discharges are nonetheless exempt because of the 1987 amendments to the CWA pertaining to stormwater pollution, 33 U.S.C. § 1342(p). The United States had argued in its previous brief to this panel that the first phase of regulations implementing the 1987 amendments exempted the silvicultural discharges at issue from NPDES permitting. *Amicus* Br. of the United States of America (Dkt. 42), at 28-32, Nov. 15, 2007. The panel disagreed, concluding that the statute precluded that interpretation of the regulations, and remanded to the district court for further proceedings consistent with its opinion. 617 F.3d at 1196, 1198.[1]

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[1] Although the United States filed *amicus* briefs at the district court and appellate court levels to provide its views to the Court on important matters of interpreting the CWA and associated regulatory provisions, the United States is not a party to this action. As such, any relief afforded to NEDC in this case must be limited to the parties and applicable only to the specified dis-

In considering the petitions for panel rehearing or rehearing en banc filed by the State and private defendants, the Court has posed two questions relating to jurisdictional provisions of the CWA:

1) Can a suit challenging EPA's interpretation of its regulations implementing the Clean Water Act's permitting requirements be brought under the Act's citizen suit provision, 33 U.S.C. § 1365(a)?

2) Must a suit challenging EPA's decision to exempt the discharge of a pollutant from the Clean Water Act's permitting requirements be brought under the Act's agency review provision, 33 U.S.C. § 1369(b)?

At issue here is whether a court has jurisdiction to entertain a citizen suit under Section 1365(a) where the claim is that EPA's interpretation of the regulation is plainly erroneous or contrary to the CWA. Where EPA promulgates an ambiguous regulation and (as here) subsequently offers an interpretation of that regulation in an *amicus* brief, that interpretation is entitled to a high level of deference under *Auer v. Robbins*, 519 U.S. 452, 461 (1997). Even so, where the reviewing court determines that the proffered interpretation is plainly erroneous or would bring the regulation into conflict with the plain terms of the CWA, Section 1369(b) does not bar the court in a citizen suit from rejecting the interpretation on that narrow ground if EPA's interpretation of the regulation has only been publically pronounced in an *amicus* brief filed after commencement of the lawsuit.

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charges before the Court, and cannot directly bind EPA, a non-party.

STATUTORY AND REGULATORY BACKGROUND

EPA's Silvicultural Rule, 40 C.F.R. § 122.27, requires that "silvicultural point sources" be subject to the CWA's NPDES permitting requirements. In its rule, EPA defined silvicultural point sources as "any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States." *Id.* Expressly not included as "silvicultural point source[s]" are "non-point source silvicultural activities," including "... harvesting operations ... or road construction and maintenance from which there is natural runoff." *Id.*

In the 1987 amendments to the CWA under Section 1342(p), Congress established a two-phase permitting scheme for stormwater runoff. In 1990, EPA promulgated the Phase I regulations, which require NPDES permits for the most significant sources of stormwater pollution, including discharges "associated with industrial activity," 33 U.S.C. § 1342(p)(2)(B). *See* 40 C.F.R. § 122.26 (regulations implementing Phase I). Phase II stormwater regulations were adopted by EPA in 1999; these specified two additional categories of stormwater point source discharges for regulation pursuant to Section 1342(p) and also retained the authority to designate additional discharges for regulation. Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges, 64 Fed. Reg. 68,722 (Dec. 8, 1999). In 2003, this Court remanded to EPA a portion of its Phase II regulations to consider, *inter alia*, whether Section 1342(p) requires EPA to regulate stormwater discharges from forest

roads, *Environmental Defense Center v. EPA*, 344 F.3d 832, 863 (9th Cir. 2003), and that remand remains pending before the Agency. All sources of stormwater not covered by Phase I or II are exempt from the permitting requirements of the CWA. *Cf. Conservation Law Found. v. Hannaford Bros. Co.*, 327 F. Supp. 2d 325, 328 (D. Vt. 2004), *aff'd*, 139 Fed. Appx. 338 (2d Cir. 2005).

DISCUSSION

1. A Challenge to an EPA Regulation Must be Brought in the Appropriate Court of Appeals Through the Special Judicial-Review Mechanism Established by 33 U.S.C. 1369(b).

The CWA's citizen suit provision, 33 U.S.C. § 1365(a), allows private citizens to bring enforcement actions against any person who is alleged to be in violation of "an effluent standard or limitation" under the CWA, including actions against persons alleged to be illegally discharging a pollutant into waters of the United States without a NPDES permit. *See* 33 U.S.C. § 1365(f) (defining "effluent standard or limitation" for purposes of citizen suit provision). The CWA's special judicial-review mechanism in 33 U.S.C. § 1369(b) authorizes private parties to obtain court of appeals review of certain EPA actions, including promulgation of "any effluent limitation or other limitation under section 1311," or rules that regulate the underlying NPDES permit procedures, as soon as they are promulgated, without waiting for the regulations to be applied to any concrete factual settings. *See*, e.g., *NRDC v. EPA*, 966 F.2d 1292, 1296-97 (9th Cir. 1992). However, such a challenge must be brought within 120 days after the rule's promulgation, except where a challenge "is based solely on grounds which arose after such 120th day."

33 U.S.C. § 1369(b)(1). The statute expressly states that any EPA action "with respect to which review could have been obtained under [33 U.S.C. 1369(b)(1)] shall not be subject to judicial review in any civil or criminal proceeding for enforcement." 33 U.S.C. § 1369(b)(2).

Thus, a challenge to an EPA regulation may not be brought in a citizen suit, but must instead be brought in the appropriate court of appeals through the special judicial-review mechanism established by 33 U.S.C. § 1369(b). For purposes of the exclusive review provision in Section 1369(b), moreover, a suit may constitute a "challenge" to an EPA regulation even if the only tangible relief the plaintiff seeks is an order directing a private party to cease a particular type of discharge. If the plaintiff's request for relief against a private party logically depends on the proposition that an EPA regulation is invalid, the suit is an impermissible "challenge" to the regulation itself, even if the plaintiff does not seek a declaratory judgment that the regulation is invalid or the entry of relief against EPA itself.[2]

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[2] The exclusive review regime in 33 U.S.C. § 1369(b) offers potential benefits to citizen plaintiffs. For example, the provision benefits potential challengers by superseding ordinary rules of prudential ripeness that might otherwise bar prompt review of promulgated regulations. *Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 891 (1990). The tradeoff for that authorization of pre-enforcement review, however, is that such a challenge must be brought within the 120-day window if it is to be brought at all. The exclusive review provision also benefits the regulated public by allowing all challenges to the breadth and substance of CWA regulations to be brought and resolved in one forum at one time, thus providing clarity to regulated entities regarding their obligations and repose to longstanding regulations.

II. How Sections 1365 and 1369 Apply to EPA's Interpretation of an Ambiguous Regulation.

Within 120 days of its issuance, a person must challenge the validity of a regulation and any contemporaneous agency interpretation of such regulation (such as an interpretation offered in its preamble) that falls within 33 U.S.C. § 1369(b)'s exclusive review provision. A court, however, has jurisdiction to entertain under Section 1365(a) a citizen suit challenging EPA's *non*-contemporaneous interpretation of its own regulation advanced in an *amicus* brief where such a challenge does not call into question the validity of the regulation itself. Yet the challenger takes on a heavy burden. In resolving that citizen suit, the court must accord the agency's interpretation heightened deference under *Auer v. Robbins*, 519 U.S. 452, 461 (1997), most recently applied by the Supreme Court in *Chase Bank USA, N.A. v. McCoy*, No. 09-329, 2011 WL 197641 (S. Ct. Jan. 24, 2011). *Auer* deference applies only where a regulation is ambiguous as to the question presented. *Id.*, at *7; *Christensen v. Harris Cnty.*, 529 U.S. 576, 588 (2000).[3] If the regulation is clear on its face, then the regulation itself obviously controls.[4]

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[3] In *Chase Bank*, the Supreme Court explained that deference is not warranted where the text of a regulation is unambiguous, as "a conflicting agency interpretation advanced in an *amicus*' brief will necessarily be plainly erroneous or inconsistent with the regulation in question." 2011 WL 197641, at *9 (internal quotations omitted). Moreover, "adopting the agency's contrary interpretation [of an unambiguous regulation] would permit the agency, under the guise of interpreting the regulation, to create *de facto* a new regulation." *Id.* (quoting *Christensen v. Harris Cnty.*, 529 U.S. at 588).

[4] If the regulation is *unambiguous* as to the question presented, and the court's construction is contrary to the plain text of the

Under the standard set forth in *Auer*, the court must defer to an agency's interpretation that is not "plainly erroneous or inconsistent with the regulation," *Chase Bank*, 2011 WL 197641, at *8, and is based on a permissible construction of the governing statute. *Christian v. City of Gladstone, Mo.*, 108 F.3d 929, 934 (8th Cir. 1997). That is, courts are appropriately reluctant to conclude that a federal agency's construction of its own rule is textually unsupportable. Nevertheless, if the agency's interpretation was not set forth contemporaneously with the rule but rather in an *amicus* brief filed after the challenged conduct took place, Section 1369(b) does not prevent a plaintiff from asserting the invalidity of the agency's interpretation in the course of a citizen suit brought under 33 U.S.C. § 1365(a).

At issue here is whether a court in a citizen suit may reject EPA's textually-reasonable interpretation of its own ambiguous regulation based on the court's view that the interpretation is contrary to the definition of "point source" contained in the CWA. The answer to that depends on when EPA's interpretation is announced. If EPA states its interpretation at the time it promulgates the regulation (e.g., in an accompanying Federal Register preamble), a potential plaintiff must accept EPA's interpretation as authoritative and challenge the regulation directly and in a timely fashion in the court of appeals pursuant to 33 U.S.C. § 1369(b). Otherwise, Section 1369(b)'s purposes would be completely subverted by allowing a

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regulation, that construction would constitute an implicit invalidation of that regulation, which is improper. *Cf. Envtl. Def. v. Duke Energy*, 549 U.S. 561, 573, 581 (2007) (recognizing the fine line between a court's reading of a regulation to align it with the court's view of the statute, and a determination that the regulation, *as written*, is invalid).

court to reject EPA's interpretation in a later citizen suit. For purposes of 33 U.S.C. § 1369(b)'s exclusive review provision, a later challenge to EPA's contemporaneous interpretation of its own regulation, if based on the view that the regulation as so construed would be contrary to the statute, is an untimely de facto challenge to the regulation itself.

The situation is significantly different where, as here, the court holds that the pertinent EPA interpretation is offered well after the regulation is promulgated.[5] To be sure, courts must give due deference under *Auer* to an agency interpretation of its own regulation, even one that is first offered in an amicus brief and even though such an interpretation postdates the promulgation of the rule. *See Chase Bank*,

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[5] In its briefing to this Court, in places, NEDC appeared to attack the Silvicultural Rule based upon its applicability to forest roads generally. This sort of challenge should have been brought within 120 days pursuant to Section 1369(b). That is why the United States argued in its previous Court of Appeals *amicus* brief that "NEDC's challenge, which argues that the [silvicultural] rule is inconsistent with the statute's definition of the term 'point source' [wa]s not based on grounds that have arisen since the expiration of the period during which the rule was subject to challenge" under 33 U.S.C § 1369(b). *Amicus* Br. (Dkt. 42), at 13. Subsequently, however, NEDC honed its argument to clearly challenge only whether the Rule could exclude stormwater discharges associated with logging activities that are collected and channeled by man. NEDC argued that this would not be "natural runoff" within the meaning of the Silvicultural Rule. The term "natural runoff" is ambiguous, and neither the Rule itself nor EPA statements in the preamble clearly addressed whether such channeled and collected runoff is included in the term "natural runoff." The first time EPA expressed in an official document its interpretation that "natural runoff" would include runoff that is channeled, ditched or culverted into man-made structures was in its *amicus* brief in this matter.

2011 WL 197641, at *8. At the time an ambiguous regulation is promulgated, however, the public cannot reasonably be expected to challenge potential regulatory interpretations that are textually plausible but that the agency has not contemporaneously offered and may never adopt. Indeed, a rule encouraging such challenges to hypothetical interpretations would likely only foster unnecessary litigation.

Thus, if EPA promulgates an ambiguous regulation and *subsequently* offers an interpretation of its regulation in an *amicus* brief that a court determines is plainly erroneous or would bring the regulation into conflict with the plain terms of the CWA, Section 1369(b) does not bar the court in a citizen suit from rejecting the interpretation on that narrow ground. This Silvicultural Rule was ambiguous at the time the rule was promulgated. *E.g.*, 617 F.3d at 1191 ("[T]here are two possible readings of the Silvicultural Rule."); *see also supra* n.5. A citizen suit, therefore, could properly challenge a non-contemporaneous agency interpretation set forth for the first time in an *amicus* brief, such as EPA's interpretation here.

Dated: February 10, 2011 Respectfully submitted,

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FEDERAL STATUTES AND REGULATIONS

33 U.S.C. § 1251. Congressional declaration of goals and policy

(a) Restoration and maintenance of chemical, physical and biological integrity of Nation's waters; national goals for achievement of objective

The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter—

(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;

(2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;

* * *

(7) it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this chapter to be met through the control of both point and nonpoint sources of pollution.

(b) Congressional recognition, preservation, and protection of primary responsibilities and rights of States

It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this chapter. It is the policy of Congress that the States manage the construction grant program under this chapter and implement the permit programs under sections 1342 and 1344 of this title. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution, and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

* * *

(e) Public participation in development, revision, and enforcement of any regulation, etc.

Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. The Administrator, in cooperation with the States, shall develop and publish regulations specifying minimum guidelines for public participation in such processes.

* * *

33 U.S.C. § 1288. Areawide waste treatment management

* * *

(b) Planning process

(1)(A) Not later than one year after the date of designation of any organization under subsection (a) of this section such organization shall have in operation a continuing areawide waste treatment management planning process consistent with section 1281 of this title. Plans prepared in accordance with this process shall contain alternatives for waste treatment management, and be applicable to all wastes generated within the area involved. The initial plan prepared in accordance with such process shall be certified by the Governor and submitted to the Administrator not later than two years after the planning process is in operation.

* * *

(2) Any plan prepared under such process shall include, but not be limited to—

* * *

(F) a process to (i) identify, if appropriate, agriculturally and silviculturally related nonpoint sources of pollution, including return flows from irrigated agriculture, and their cumulative effects, runoff from manure disposal areas, and from land used for livestock and crop production, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(G) a process to (i) identify, if appropriate, mine-related sources of pollution including new, current, and abandoned surface and underground mine runoff, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

(H) a process to (i) identify construction activity related sources of pollution, and (ii) set forth procedures and methods (including land use requirements) to control to the extent feasible such sources;

* * *

(e) Permits not to conflict with approved plans

No permit under section 1342 of this title shall be issued for any point source which is in conflict with a

plan approved pursuant to subsection (b) of this section.

* * *

33 U.S.C. § 1311. Effluent limitations

(a) Illegality of pollutant discharges except in compliance with law

Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

* * *

33 U.S.C. § 1312. Water quality related effluent limitations

(a) Establishment

Whenever, in the judgment of the Administrator or as identified under section 1314(l) of this title, discharges of pollutants from a point source or group of point sources, with the application of effluent limitations required under section 1311(b)(2) of this title, would interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters which shall assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water, effluent limitations (including alternative effluent control strategies) for such point source or sources

shall be established which can reasonably be expected to contribute to the attainment or maintenance of such water quality.

* * *

33 U.S.C. § 1313. Water quality standards and implementation plans

* * *

(c) Review; revised standards; publication

* * *

(2)(A) Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

* * *

33 U.S.C. § 1314. Information and guidelines

* * *

(e) Best management practices for industry

The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, may publish regulations, supplemental to any effluent limitations specified under subsections (b) and (c) of this section for a class or category of point sources, for any specific pollutant which the Administrator is charged with a duty to regulate as a toxic or hazardous pollutant under section 1317(a)(1) or 1321 of this title, to control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage which the Administrator determines are associated with or ancillary to the industrial manufacturing or treatment process within such class or category of point sources and may contribute significant amounts of such pollutants to navigable waters. Any applicable controls established under this subsection shall be included as a requirement for the purposes of section 1311, 1312, 1316, 1317, or 1343 of this title, as the case may be, in any permit issued to a point source pursuant to section 1342 of this title.

(f) Identification and evaluation of nonpoint sources of pollution; processes, procedures, and methods to control pollution

The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall issue to appropriate Federal agencies,

the States, water pollution control agencies, and agencies designated under section 1288 of this title, within one year after October 18, 1972 (and from time to time thereafter) information including (1) guidelines for identifying and evaluating the nature and extent of nonpoint sources of pollutants, and (2) processes, procedures, and methods to control pollution resulting from—

(A) agricultural and silvicultural activities, including runoff from fields and crop and forest lands;

(B) mining activities, including runoff and siltation from new, currently operating, and abandoned surface and underground mines;

(C) all construction activity, including runoff from the facilities resulting from such construction;

(D) the disposal of pollutants in wells or in subsurface excavations;

(E) salt water intrusion resulting from reductions of fresh water flow from any cause, including extraction of ground water, irrigation, obstruction, and diversion; and

(F) changes in the movement, flow, or circulation of any navigable waters or ground waters, including changes caused by the construction of dams, levees, channels, causeways, or flow diversion facilities.

Such information and revisions thereof shall be published in the Federal Register and otherwise made available to the public.

* * *

33 U.S.C. § 1342. National pollutant discharge elimination system

(a) Permits for discharge of pollutants

(1) Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge will meet either (A) all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or (B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.

* * *

(k) Compliance with permits

Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of sections 1319 and 1365 of this title, with sections 1311, 1312, 1316, 1317, and 1343 of this title, except any standard imposed under section 1317 of this title for a toxic pollutant injurious to human health. Until December 31, 1974, in any case where a permit for discharge has been applied for pursuant to this section, but final administrative disposition of such application has not been made, such discharge shall not be a violation of (1) section 1311, 1316, or 1342 of this title, or (2) section 407 of this title, unless the Administrator or other plaintiff proves that final administrative disposition of such application has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application. * * *

(l) Limitation on permit requirement

(1) Agricultural return flows

The Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture, nor shall the Administrator directly or indirectly, require any State to require such a permit.

(2) Stormwater runoff from oil, gas, and mining operations

The Administrator shall not require a permit under this section, nor shall the Administrator directly or

indirectly require any State to require a permit, for discharges of stormwater runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations.

* * *

(p) Municipal and industrial stormwater discharges

(1) General rule

Prior to October 1, 1994, the Administrator or the State (in the case of a permit program approved under this section) shall not require a permit under this section for discharges composed entirely of stormwater.

(2) Exceptions

Paragraph (1) shall not apply with respect to the following stormwater discharges:

(A) A discharge with respect to which a permit has been issued under this section before February 4, 1987.

(B) A discharge associated with industrial activity.

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.

(E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) Permit requirements

(A) Industrial discharges

Permits for discharges associated with industrial activity shall meet all applicable provisions of this section and section 1311 of this title.

(B) Municipal discharge

Permits for discharges from municipal storm sewers—

(i) may be issued on a system- or jurisdiction-wide basis;

(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

(4) Permit application requirements

(A) Industrial and large municipal discharges

Not later than 2 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraphs (2)(B) and (2)(C). Applications for permits for such discharges shall be filed no later than 3 years after February 4, 1987. Not later than 4 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(B) Other municipal discharges

Not later than 4 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for

stormwater discharges described in paragraph (2)(D). Applications for permits for such discharges shall be filed no later than 5 years after February 4, 1987. Not later than 6 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(5) Studies

The Administrator, in consultation with the States, shall conduct a study for the purposes of—

(A) identifying those stormwater discharges or classes of stormwater discharges for which permits are not required pursuant to paragraphs (1) and (2) of this subsection;

(B) determining, to the maximum extent practicable, the nature and extent of pollutants in such discharges; and

(C) establishing procedures and methods to control stormwater discharges to the extent necessary to mitigate impacts on water quality.

Not later than October 1, 1988, the Administrator shall submit to Congress a report on the results of the study described in subparagraphs (A) and (B). Not later than October 1, 1989, the Administrator shall submit to Congress a report on the results of the study described in subparagraph (C).

(6) Regulations

Not later than October 1, 1993, the Administrator, in consultation with State and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum, (A) establish priorities, (B) establish requirements for State stormwater management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.

* * *

(r) Discharges incidental to the normal operation of recreational vessels

No permit shall be required under this chapter by the Administrator (or a State, in the case of a permit program approved under subsection (b)) for the discharge of any graywater, bilge water, cooling water, weather deck runoff, oil water separator effluent, or effluent from properly functioning marine engines, or any other discharge that is incidental to the normal operation of a vessel, if the discharge is from a recreational vessel.

33 U.S.C. § 1344. Permits for dredged or fill material

(a) Discharge into navigable waters at specified disposal sites

The Secretary may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites. Not later than the fifteenth day after the date an applicant submits all the information required to complete an application for a permit under this subsection, the Secretary shall publish the notice required by this subsection.

* * *

(e) General permits on State, regional, or nationwide basis

(1) In carrying out his functions relating to the discharge of dredged or fill material under this section, the Secretary may, after notice and opportunity for public hearing, issue general permits on a State, regional, or nationwide basis for any category of activities involving discharges of dredged or fill material if the Secretary determines that the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effect on the environment. Any general permit issued under this subsection shall (A) be based on the guidelines described in subsection (b)(1) of this section, and (B) set forth the requirements and

standards which shall apply to any activity authorized by such general permit.

(2) No general permit issued under this subsection shall be for a period of more than five years after the date of its issuance and such general permit may be revoked or modified by the Secretary if, after opportunity for public hearing, the Secretary determines that the activities authorized by such general permit have an adverse impact on the environment or such activities are more appropriately authorized by individual permits.

(f) Non-prohibited discharge of dredged or fill material

(1) Except as provided in paragraph (2) of this subsection, the discharge of dredged or fill material—

* * *

(E) for the purpose of construction or maintenance of farm roads or forest roads, or temporary roads for moving mining equipment, where such roads are constructed and maintained, in accordance with best management practices, to assure that flow and circulation patterns and chemical and biological characteristics of the navigable waters are not impaired, that the reach of the navigable waters is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized;

* * *

is not prohibited by or otherwise subject to regulation under this section or section 1311(a) or 1342 of this title (except for effluent standards or prohibitions under section 1317 of this title).

* * *

33 U.S.C. § 1362. Definitions

Except as otherwise specifically provided, when used in this chapter:

* * *

(5) The term "person" means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.

(6) The term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. This term does not mean (A) "sewage from vessels or a discharge incidental to the normal operation of a vessel of the Armed Forces" within the meaning of section 1322 of this title; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such

State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

* * *

(11) The term "effluent limitation" means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.

(12) The term "discharge of a pollutant" and the term "discharge of pollutants" each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.

* * *

(14) The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

* * *

(16) The term "discharge" when used without qualification includes a discharge of a pollutant, and a discharge of pollutants.

* * *

(19) The term "pollution" means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

* * *

33 U.S.C. § 1365. Citizen suits

(a) Authorization; jurisdiction

Except as provided in subsection (b) of this section and section 1319(g)(6) of this title, any citizen may commence a civil action on his own behalf—

(1) against any person (including (i) the United States, and (ii) any other governmental instrumentality or agency to the extent permitted by the eleventh amendment to the Constitution) who is alleged to be in violation of (A) an effluent standard or limitation under this chapter or (B) an order issued by the Administrator or a State with respect to such a standard or limitation, or

(2) against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator.

The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce such an effluent standard or limitation, or such an order, or to order the Administrator to perform such act or duty, as the case may be, and to apply any appropriate civil penalties under section 1319(d) of this title.

(b) Notice

No action may be commenced—

(1) under subsection (a)(1) of this section—

(A) prior to sixty days after the plaintiff has given notice of the alleged violation (i) to the Administrator, (ii) to the State in which the alleged violation occurs, and (iii) to any alleged violator of the standard, limitation, or order, or

(B) if the Administrator or State has commenced and is diligently prosecuting a civil or criminal action in a court of the United States, or a State to require compliance with the standard, limitation, or order, but in any such action in a court of the United States any citizen may intervene as a matter of right.

(2) under subsection (a)(2) of this section prior to sixty days after the plaintiff has given notice of such action to the Administrator,

except that such action may be brought immediately after such notification in the case of an action under this section respecting a violation of sections 1316

and 1317(a) of this title. Notice under this subsection shall be given in such manner as the Administrator shall prescribe by regulation.

(c) Venue; intervention by Administrator; United States interests protected

* * *

(2) In such action under this section, the Administrator, if not a party, may intervene as a matter of right.

(3) Protection of interests of United States

Whenever any action is brought under this section in a court of the United States, the plaintiff shall serve a copy of the complaint on the Attorney General and the Administrator. No consent judgment shall be entered in an action in which the United States is not a party prior to 45 days following the receipt of a copy of the proposed consent judgment by the Attorney General and the Administrator.

* * *

(f) Effluent standard or limitation

For purposes of this section, the term "effluent standard or limitation under this chapter" means (1) effective July 1, 1973, an unlawful act under subsection (a) of section 1311 of this title; (2) an effluent limitation or other limitation under section 1311 or 1312 of this title; (3) standard of performance under section 1316 of this title; (4) prohibition, effluent

standard or pretreatment standards under section 1317 of this title; (5) certification under section 1341 of this title; (6) a permit or condition thereof issued under section 1342 of this title, which is in effect under this chapter (including a requirement applicable by reason of section 1323 of this title); or (7) a regulation under section 1345(d) of this title.

* * *

33 U.S.C. § 1369. Administrative procedure and judicial review

* * *

(b) Review of Administrator's actions; selection of court; fees

(1) Review of the Administrator's action (A) in promulgating any standard of performance under section 1316 of this title, (B) in making any determination pursuant to section 1316(b)(1)(C) of this title, (C) in promulgating any effluent standard, prohibition, or pretreatment standard under section 1317 of this title, (D) in making any determination as to a State permit program submitted under section 1342(b) of this title, (E) in approving or promulgating any effluent limitation or other limitation under section 1311, 1312, 1316, or 1345 of this title, (F) in issuing or denying any permit under section 1342 of this title, and (G) in promulgating any individual control strategy under section 1314(l) of this title, may be had by any interested person in the Circuit Court of Appeals of the United States for the Federal judicial district in which such person resides or transacts business

which is directly affected by such action upon application by such person. Any such application shall be made within 120 days from the date of such determination, approval, promulgation, issuance or denial, or after such date only if such application is based solely on grounds which arose after such 120th day.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) of this subsection shall not be subject to judicial review in any civil or criminal proceeding for enforcement.

(3) Award of fees

In any judicial proceeding under this subsection, the court may award costs of litigation (including reasonable attorney and expert witness fees) to any prevailing or substantially prevailing party whenever it determines that such award is appropriate.

* * *

40 C.F.R. § 125.4 (1975) Exclusions.

The following do not require an NPDES permit:

* * *

(j) Discharges of pollutants from agricultural and silvicultural activities, including irrigation return flow and runoff from orchards, cultivated crops, pastures, rangelands, and forest lands, except that this exclusion shall not apply to the following:

* * *

(5) Discharges from any agricultural or silvicultural activity which have been identified by the Regional Administrator or the Director of the State water pollution control agency or interstate agency as a significant contributor of pollution.

40 C.F.R. § 124.85 (1976) Silvicultural activities.

(a) *Definitions.* For the purpose of this section:

(1) The term "silvicultural point source" means any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into navigable waters.

Comment: This term does not include nonpoint source activities inherent to silviculture such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, and road construction and maintenance from which runoff results from precipitation events. However, some of these activities (such as stream crossings for roads) may involve point source discharges of dredged or fill material which may require a § 404 permit (see 33 CFR 209.120).

(2) The term "rock crushing and gravel washing facilities" means those facilities which process crushed and broken stone, gravel and riprap (see 40 CFR 436,

Subpart B, and the effluent limitations guidelines pursuant thereto).

(3) The term "log sorting and log storage facilities" means those facilities wherein discharges result from the holding of unprocessed wood, i.e. logs or roundwood with bark or after removal of bark in self-contained bodies of water (mill ponds or log ponds) or land storage where water is applied intentionally on the logs (wet decking). (See 40 CFR 429, Subpart J, and the effluent limitations guidelines pursuant thereto).

(b) *Application for Permit.* (1) Any person discharging or proposing to discharge pollutants from a silvicultural point source, who has not previously submitted an NPDES permit application in reliance on the prior exclusion of silvicultural activities from the permit program, shall file such an application with the Director by December 31, 1976.

* * *

40 C.F.R. § 122.2 Definitions.

The following definitions apply to Parts 122, 123, and 124. Terms not defined in this section have the meaning given by CWA. When a defined term appears in a definition, the defined term is sometimes placed in quotation marks as an aid to readers.

* * *

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

* * *

Facility or activity means any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

* * *

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete

fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. (See § 122.3).

* * *

Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

* * *

40 C.F.R. § 122.3 Exclusions.

The following discharges do not require NPDES permits:

* * *

(e) Any introduction of pollutants from non point-source agricultural and silvicultural activities, including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands, but not discharges from concentrated animal feeding operations as defined in § 122.23, discharges from concentrated aquatic animal production facilities as defined in § 122.24, discharges to aquaculture projects as defined in § 122.25, and discharges from silvicultural point sources as defined in § 122.27.

* * *

40 C.F.R. § 122.26 Storm water discharges (applicable to State NPDES programs, see § 123.25).

(a) *Permit requirement.*

(1) Prior to October 1, 1994, discharges composed entirely of storm water shall not be required to obtain a NPDES permit except:

(i) A discharge with respect to which a permit has been issued prior to February 4, 1987;

(ii) A discharge associated with industrial activity (see § 122.26(a)(4));

(iii) A discharge from a large municipal separate storm sewer system;

(iv) A discharge from a medium municipal separate storm sewer system;

(v) A discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This designation may include a discharge from any conveyance or system of conveyances used for collecting and conveying storm water runoff or a system of discharges from municipal separate storm sewers, except for those discharges from conveyances which do not require a permit under pa-

ragraph (a)(2) of this section or agricultural storm water runoff which is exempted from the definition of point source at § 122.2.

The Director may designate discharges from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination the Director may consider the following factors:

(A) The location of the discharge with respect to waters of the United States as defined at 40 CFR 122.2.

(B) The size of the discharge;

(C) The quantity and nature of the pollutants discharged to waters of the United States; and

(D) Other relevant factors.

(2) The Director may not require a permit for discharges of storm water runoff from the following:

(i) Mining operations composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that have not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations, except in accordance with paragraph (c)(1)(iv) of this section.

(ii) All field activities or operations associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities, except in accordance with paragraph (c)(1)(iii) of this section. Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities are not subject to the provisions of paragraph (c)(1)(iii)(C) of this section.

Note to paragraph (a)(2)(ii): EPA encourages operators of oil and gas field activities or operations to implement and maintain Best Management Practices (BMPs) to minimize discharges of pollutants, including sediment, in storm water both during and after construction activities to help ensure protection of surface water quality during storm events. Appropriate controls would be those suitable to the site conditions and consistent with generally accepted engineering design criteria and manufacturer specifications. Selection of BMPs could also be affected by seasonal or climate conditions.

(3) Large and medium municipal separate storm sewer systems.

(i) Permits must be obtained for all discharges from large and medium municipal separate storm sewer systems.

(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or medium municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.

(iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either:

(A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operators of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system;

(B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or

(C) A regional authority may be responsible for submitting a permit application under the following guidelines:

(1) The regional authority together with co-applicants shall have authority over a storm water management program that is in existence, or shall be in existence at the time part 1 of the application is due;

(2) The permit applicant or co-applicants shall establish their ability to make a timely submission of part 1 and part 2 of the municipal application;

(3) Each of the operators of municipal separate storm sewers within the systems described in paragraphs (b)(4)(i), (ii), and (iii) or (b)(7)(i), (ii), and (iii) of this section, that are under the purview of the designated regional authority, shall comply with the application requirements of paragraph (d) of this section.

(iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

* * *

(6) Non-municipal separate storm sewers. For storm water discharges associated with industrial activity from point sources which discharge through a non-municipal or non-publicly owned separate storm sewer system, the Director, in his discretion, may issue: a single NPDES permit, with each discharger a co-permittee to a permit issued to the operator of the portion of the system that discharges into waters of the United States; or, individual permits to each discharger of storm water associated with industrial activity through the non-municipal conveyance system.

(i) All storm water discharges associated with industrial activity that discharge through a storm water discharge system that is not a municipal separate storm sewer must be covered by an individual permit, or a permit issued to the operator of the portion of the system that discharges to waters of the United States, with each discharger to the non-municipal conveyance a co-permittee to that permit.

(ii) Where there is more than one operator of a single system of such conveyances, all operators of storm water discharges associated with industrial activity must submit applications.

(iii) Any permit covering more than one operator shall identify the effluent limitations, or other permit conditions, if any, that apply to each operator.

* * *

(9)(i) On and after October 1, 1994, for discharges composed entirely of storm water, that are not required by paragraph (a)(1) of this section to obtain a permit, operators shall be required to obtain a NPDES permit only if:

(A) The discharge is from a small MS4 required to be regulated pursuant to § 122.32;

(B) The discharge is a storm water discharge associated with small construction activity pursuant to paragraph (b)(15) of this section;

(C) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that storm water controls are needed for the discharge based on wasteload allocations that are part of "total maximum daily loads" (TMDLs) that address the pollutant(s) of concern; or

(D) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(ii) Operators of small MS4s designated pursuant to paragraphs (a)(9)(i)(A), (a)(9)(i)(C), and (a)(9)(i)(D) of this section shall seek coverage un-

der an NPDES permit in accordance with §§ 122.33 through 122.35. Operators of non-municipal sources designated pursuant to paragraphs (a)(9)(i)(B), (a)(9)(i)(C), and (a)(9)(i)(D) of this section shall seek coverage under an NPDES permit in accordance with paragraph (c)(1) of this section.

(iii) Operators of storm water discharges designated pursuant to paragraphs (a)(9)(i)(C) and (a)(9)(i)(D) of this section shall apply to the Director for a permit within 180 days of receipt of notice, unless permission for a later date is granted by the Director (see § 124.52(c) of this chapter).

(b) *Definitions.*

* * *

(8) *Municipal separate storm sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency

under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

(9) *Outfall* means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

* * *

(13) *Storm water* means storm water runoff, snow melt runoff, and surface runoff and drainage.

(14) *Storm water discharge associated with industrial activity* means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under this part 122. For the categories of industries identified in

this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs (b)(14)(i) through (xi) of this section) include those facilities designated under the provisions of paragraph (a)(1)(v) of this section. The following categories of facilities are considered to be engaging

in "industrial activity" for purposes of paragraph (b)(14):

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) in paragraph (b)(14) of this section);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are min-

ing sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221–25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those

portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (b)(14) (i)–(vii) or (ix)–(xi) of this section are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA;

(x) Construction activity including clearing, grading and excavation, except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221–25;

* * *

40 C.F.R. § 122.27 Silvicultural activities (applicable to State NPDES programs, see § 123.25).

(a) *Permit requirement.* Silvicultural point sources, as defined in this section, as point sources subject to the NPDES permit program.

(b) *Definitions.*

(1) *Silvicultural point source* means any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. The term does not include non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff. However, some of these activities (such as stream crossing for roads) may involve point source discharges of dredged or fill material which may require a CWA section 404 permit (See 33 CFR 209.120 and Part 233).

(2) *Rock crushing and gravel washing facilities* means facilities which process crushed and broken stone, gravel, and riprap (See 40 CFR Part 436, Subpart B, including the effluent limitations guidelines).

(3) *Log sorting and log storage facilities* means facilities whose discharges result from the holding of unprocessed wood, for example, logs or roundwood with bark or after removal of bark held in self-contained bodies of water (mill ponds or log ponds) or stored on land where water is applied intentionally on the logs (wet decking). (See 40 CFR Part 429, Subpart I, including the effluent limitations guidelines).

40 C.F.R. § 122.28 General permits (applicable to State NPDES programs, see § 123.25).

(a) *Coverage.* The Director may issue a general permit in accordance with the following:

(1) *Area.* The general permit shall be written to cover one or more categories or subcategories of discharges or sludge use or disposal practices or facilities described in the permit under paragraph (a)(2)(ii) of this section, except those covered by individual permits, within a geographic area. The area should correspond to existing geographic or political boundaries such as:

(i) Designated planning areas under sections 208 and 303 of CWA;

(ii) Sewer districts or sewer authorities;

(iii) City, county, or State political boundaries;

(iv) State highway systems;

(v) Standard metropolitan statistical areas as defined by the Office of Management and Budget;

(vi) Urbanized areas as designated by the Bureau of the Census according to criteria in 30 FR 15202 (May 1, 1974); or

(vii) Any other appropriate division or combination of boundaries.

(2) *Sources.* The general permit may be written to regulate one or more categories or subcategories of discharges or sludge use or disposal practices or facilities, within the area described in paragraph (a)(1) of this section, where the sources within a covered subcategory of discharges are either:

(i) Storm water point sources; or

(ii) One or more categories or subcategories of point sources other than storm water point sources, or one or more categories or subcategories of "treatment works treating domestic sewage", if the sources or "treatment works treating domestic sewage" within each category or subcategory all:

(A) Involve the same or substantially similar types of operations;

(B) Discharge the same types of wastes or engage in the same types of sludge use or disposal practices;

(C) Require the same effluent limitations, operating conditions, or standards for sewage sludge use or disposal;

(D) Require the same or similar monitoring; and

(E) In the opinion of the Director, are more appropriately controlled under a general permit than under individual permits.

* * *

OREGON STATUTES AND RULES

Or. Rev. Stat. § 527.765. Best management practices for maintenance of water quality

(1) The State Board of Forestry shall establish best management practices and other rules applying to forest practices as necessary to insure that to the maximum extent practicable nonpoint source discharges of pollutants resulting from forest operations on forestlands do not impair the achievement and maintenance of water quality standards established by the Environmental Quality Commission for the waters of the state. Such best management practices shall consist of forest practices rules adopted to prevent or reduce pollution of waters of the state. Factors to be considered by the board in establishing best management practices shall include, where applicable, but not be limited to:

(a) Beneficial uses of waters potentially impacted;

(b) The effects of past forest practices on beneficial uses of water;

(c) Appropriate practices employed by other forest managers;

(d) Technical, economic and institutional feasibility; and

(e) Natural variations in geomorphology and hydrology.

(2) The board shall consult with the Environmental

Quality Commission in adoption and review of best management practices and other rules to address nonpoint source discharges of pollutants resulting from forest operations on forestlands.

(3)(a) Notwithstanding ORS 183.310 (8), upon written petition for rulemaking under ORS 183.390 of any interested person or agency, the board shall review the best management practices adopted pursuant to this section. In addition to all other requirements of law, the petition must allege with reasonable specificity that nonpoint source discharges of pollutants resulting from forest operations being conducted in accordance with the best management practices are a significant contributor to violations of such standards.

(b) Except as provided in paragraph (c) of this subsection, if the board determines that forest operations being conducted in accordance with the best management practices are neither significantly responsible for particular water quality standards not being met nor are a significant contributor to violations of such standards, the board shall issue an order dismissing the petition.

(c) If the petition for review of best management practices is made by the Environmental Quality Commission, the board shall not terminate the review without the concurrence of the commission, unless the board commences rulemaking in accordance with paragraph (e) of this subsection.

(d) If a petition for review is dismissed, upon conclusion of the review, the board shall issue an order

that includes findings regarding specific allegations in the petition and shall state the board's reasons for any conclusions to the contrary.

(e) If, pursuant to review, the board determines that best management practices should be reviewed, the board shall commence rulemaking proceedings for that purpose. Rules specifying the revised best management practices must be adopted not later than two years from the filing date of the petition for review unless the board, with concurrence of the Environmental Quality Commission, finds that special circumstances require additional time.

(f) Notwithstanding the time limitation established in paragraph (e) of this subsection, at the request of the Environmental Quality Commission, the board shall take action as quickly as practicable to prevent significant damage to beneficial uses identified by the commission while the board is revising its best management practices and rules as provided for in this section.

Or. Admin. R. 629-625-0000 Purpose

(1) Forest roads are essential to forest management and contribute to providing jobs, products, tax base and other social and economic benefits.

(2) OAR 629-625-0000 through 629-625-0650 shall be known as the road construction and maintenance rules.

(3) The purpose of the road construction and main-

tenance rules is to establish standards for locating, designing, constructing and maintaining efficient and beneficial forest roads; locating and operating rock pits and quarries; and vacating roads, rock pits, and quarries that are no longer needed; in manners that provide the maximum practical protection to maintain forest productivity, water quality, and fish and wildlife habitat.

(4) The road construction and maintenance rules shall apply to all forest practices regions unless otherwise indicated.

Or. Admin. R. 629-625-0100 Written Plans for Road Construction

(1) A properly located, designed, and constructed road greatly reduces potential impacts to water quality, forest productivity, fish, and wildlife habitat. To prevent improperly located, designed, or constructed roads, a written plan is required in the sections listed below.

(2) In addition to the requirements of the water protection rules, operators must submit a written plan to the State Forester before:

(a) Constructing a road where there is an apparent risk of road-generated materials entering waters of the state from direct placement, rolling, falling, blasting, landslide or debris flow;

(b) Conducting machine activity in Type F or Type D streams, lakes or significant wetlands; or

(c) Constructing roads in riparian management areas.

(3) Operators shall submit a written plan to the State Forester before constructing roads on high landslide hazard locations. Operators and the State Forester shall share responsibility to identify high landslide hazard locations and to determine if there is public safety exposure from shallow, rapidly moving landslides using methods described in OAR 629-623-0000 through 0300. If there is public safety exposure, then the practices described in 629-623-0400 through 0800 shall also apply.

(4) In addition to the requirements of the water protection rules, operators shall submit a written plan to the State Forester before placing woody debris or boulders in stream channels for stream enhancement.

Or. Admin. R. 629-625-0200 Road Location

(1) The purpose of this rule is to ensure roads are located where potential impacts to waters of the state are minimized.

(2) When locating roads, operators shall designate road locations which minimize the risk of materials entering waters of the state and minimize disturbance to channels, lakes, wetlands and floodplains.

(3) Operators shall avoid locating roads on steep slopes, slide areas, high landslide hazard locations, and in wetlands, riparian management areas, channels or floodplains where viable alternatives exist.

(4) Operators shall minimize the number of stream crossings.

(5) To reduce the duplication of road systems and associated ground disturbance, operators shall make use of existing roads where practical. Where roads traverse land in another ownership and will adequately serve the operation, investigate options for using those roads before constructing new roads.

Or. Admin. R. 629-625-0300 Road Design

(1) The purpose of OARs 629-625-0300 through 629-625-0340 is to provide design specifications for forest roads that protect water quality.

(2) Operators shall design and construct roads to limit the alteration of natural slopes and drainage patterns to that which will safely accommodate the anticipated use of the road and will also protect waters of the state.

Or. Admin. R. 629-625-0310 Road Prism

(1) Operators shall use variable grades and alignments to avoid less suitable terrain so that the road prism is the least disturbing to protected resources, avoids steep sidehill areas, wet areas and potentially unstable areas as safe, effective vehicle use requirements allow.

(2) Operators shall end-haul excess material from steep slopes or high landslide hazard locations where needed to prevent landslides.

(3) Operators shall design roads no wider than necessary to accommodate the anticipated use.

(4) Operators shall design cut and fill slopes to minimize the risk of landslides.

(5) Operators shall stabilize road fills as needed to prevent fill failure and subsequent damage to waters of the state using compaction, buttressing, subsurface drainage, rock facing or other effective means.

Or. Admin. R. 629-625-0320 Stream Crossing Structures

(1) Operators shall design and construct stream crossing structures (culverts, bridges and fords) to:

(a) Minimize excavation of side slopes near the channel.

(b) Minimize the volume of material in the fill.

(A) Minimizing fill material is accomplished by restricting the width and height of the fill to the amount needed for safe use of the road by vehicles, and by providing adequate cover over the culvert or other drainage structure.

(B) Fills over 15 feet deep contain a large volume of material that can be a considerable risk to downstream beneficial uses if the material moves downstream by water. Consequently, for any fill over 15 feet deep operators shall submit to the State Forester a written plan that describes the

fill and drainage structure design. Written plans shall include a design that minimizes the likelihood of:

(i) Surface erosion;

(ii) Embankment failure; and

(iii) Downstream movement of fill material.

(c) Prevent erosion of the fill and channel.

(2) Operators shall design and construct stream crossings (culverts, bridges, and fords) to:

(a) Pass a peak flow that at least corresponds to the 50-year return interval. When determining the size of culvert needed to pass a peak flow corresponding to the 50-year return interval, operators shall select a size that is adequate to preclude ponding of water higher than the top of the culvert; and

(b) Allow migration of adult and juvenile fish upstream and downstream during conditions when fish movement in that stream normally occurs.

(3) An exception to the requirements in subsection (2)(a) of this rule is allowed to reduce the height of fills where roads cross wide flood plains. Such an exception shall be allowed if the operator obtains approval of a plan for an alternate practice. The State Forester will approve such a plan when the plan demonstrates:

(a) The stream crossing site includes a wide flood plain; and

(b) The stream crossing structure matches the size of the active channel and is covered by the minimum fill necessary to protect the structure;

(c) Except for culvert cover, soil fill is not placed in the flood plain; and

(d) The downstream edge of all fill is armored with rock of sufficient size and depth to protect the fill from eroding when a flood flow occurs.

Or. Admin. R. 629-625-0330 Drainage

(1) The purpose of this rule is to provide a drainage system on new and reconstructed roads that minimizes alteration of stream channels and the risk of sediment delivery to waters of the state. Drainage structures should be located based on the priority listed below. When there is a conflict between the requirements of sections (2) through (6) of this rule, the lowest numbered section takes precedence, and the later-numbered and conflicting section shall not be implemented.

(2) Operators shall not concentrate road drainage water into headwalls, slide areas, high landslide hazard locations, or steep erodible fillslopes.

(3) Operators shall not divert water from stream channels into roadside ditches.

(4) Operators shall install dips, water bars, or cross

drainage culverts above and away from stream crossings so that road drainage water may be filtered before entering waters of the state.

(5) Operators shall provide drainage when roads cross or expose springs, seeps, or wet areas.

(6) Operators shall provide a drainage system using grade reversals, surface sloping, ditches, culverts and/or waterbars as necessary to minimize development of gully erosion of the road prism or slopes below the road.

Or. Admin. R. 629-625-0430 Stream Protection

(1) When constructing stream crossings, operators shall minimize disturbance to banks, existing channels, and riparian management areas.

(2) In addition to the requirements of the water protection rules, operators shall keep machine activity in beds of streams to an absolute minimum. Acceptable activities where machines are allowed in streambeds, such as installing culverts, shall be restricted to periods of low water levels. Operators shall submit a written plan to the State Forester for machine activity in Type F or Type D streams, lakes, and significant wetlands.

(3) For all roads constructed or reconstructed operators shall install water crossing structures where needed to maintain the flow of water and passage of adult and juvenile fish between side channels or wetlands and main channels.

(4) Operators shall leave or re-establish areas of vegetation between roads and waters of the state to protect water quality.

(5) Operators shall remove temporary stream crossing structures promptly after use, and shall construct effective sediment barriers at approaches to channels.

Or. Admin. R. 629-625-0600 Road Maintenance

(1) The purpose of this rule is to protect water quality by timely maintenance of all active and inactive roads.

(2) Operators shall maintain active and inactive roads in a manner sufficient both to provide a stable surface and to keep the drainage system operating as necessary to protect water quality.

(3) Operators shall inspect and maintain culvert inlets and outlets, drainage structures and ditches before and during the rainy season as necessary to diminish the likelihood of clogging and the possibility of washouts.

(4) Operators shall provide effective road surface drainage, such as water barring, surface crowning, constructing sediment barriers, or outsloping prior to the rainy and runoff seasons.

(5) When applying road oil or other surface stabilizing materials, operators shall plan and conduct the operation in a manner as to prevent entry of these materials into waters of the state.

(6) In the Northwest and Southwest Oregon Regions, operators shall maintain and repair active and inactive roads as needed to minimize damage to waters of the state. This may include maintenance and repair of all portions of the road prism during and after intense winter storms, as safety, weather, soil moisture and other considerations permit.

(7) Operators shall place material removed from ditches in a stable location.

(8) In order to maintain fish passage through water crossing structures, operators shall:

(a) Maintain conditions at the structures so that passage of adult and juvenile fish is not impaired during periods when fish movement normally occurs. This standard is required only for roads constructed or reconstructed after September 1994, but is encouraged for all other roads; and

(b) As reasonably practicable, keep structures cleared of woody debris and deposits of sediment that would impair fish passage.

(c) Other fish passage requirements under the authority of ORS 498.268 and 509.605 that are administered by other state agencies may be applicable to water crossing structures, including those constructed before September 1, 1994.

(9) Where needed to protect water quality, as directed by the State Forester, operators shall place additional cross drainage structures on existing ac-

tive roads within their ownership prior to hauling to meet the requirements of OAR 629-625-0330.

Or. Admin. R. 629-625-0700 Wet Weather Road Use

(1) The purpose of this rule is to reduce delivery of fine sediment to streams caused by the use of forest roads during wet periods that may adversely affect downstream water quality in Type F or Type D streams.

(2) Operators shall use durable surfacing or other effective measures that resist deep rutting or development of a layer of mud on top of the road surface on road segments that drain directly to streams on active roads that will be used for log hauling during wet periods.

(3) Operators shall cease active road use where the surface is deeply rutted or covered by a layer of mud and where runoff from that road segment is causing a visible increase in the turbidity of Type F or Type D streams as measured above and below the effects of the road.

Or. Admin. R. 629-635-0100 Purpose and Goals

(1) The leading use on private forestland is the growing and harvesting of trees, consistent with sound management of soil, air, water, fish and wildlife resources. There is a unique concentration of public resource values in and near waters of the state because these areas are critical for the overall maintenance of fish and wildlife and for maintaining water quality.

Consequently, the policies of the Forest Practices Act, including encouraging economically efficient forest practices, are best achieved by focusing protection measures in riparian management areas, where the emphasis is on providing water quality and fish and wildlife habitat.

(2) OAR 629-635-0000 through 629-660-0060 are known as the "water protection rules."

(3) The purpose of the water protection rules is to protect, maintain and, where appropriate, improve the functions and values of streams, lakes, wetlands, and riparian management areas. Active management is encouraged where appropriate to meet this purpose. These functions and values include water quality, hydrologic functions, the growing and harvesting of trees, and fish and wildlife resources.

(4) Plans for alternate practices may be used to alter vegetation retention requirements in the water protection rules based on local site conditions. The plans may include but are not limited to site specific vegetation retention prescriptions as described in OAR 629-640-0400 (for streams) and 629-645-0020 (for wetlands). Operators are encouraged to:

(a) Evaluate site specific conditions in waters and riparian management areas; and

(b) Develop plans for alternate practices that will:

(A) Maintain, enhance, or restore riparian functions in streams, wetlands, lakes; or

(B) Meet the purposes and goals of the water protection rules while better meeting operational or other objectives.

(5) General vegetation retention prescriptions for streams, lakes and wetlands apply where current vegetation conditions within the riparian management area have achieved or are likely to achieve the desired future condition in a "timely manner." Landowners are encouraged to manage stands within riparian management areas in order to grow trees in excess of what must be retained so that the opportunity is available to harvest the excess.

(6) Alternative vegetation retention prescriptions for streams allow incentives for operators to actively manage vegetation where existing vegetation conditions are not likely to achieve the desired future condition in a "timely manner."

(7) The overall goal of the water protection rules is to provide resource protection during operations adjacent to and within streams, lakes, wetlands and riparian management areas so that, while continuing to grow and harvest trees, the protection goals for fish, wildlife, and water quality are met.

(a) The protection goal for water quality (as prescribed in ORS 527.765) is to ensure through the described forest practices that, to the maximum extent practicable, non-point source discharges of pollutants resulting from forest operations do not impair the achievement and maintenance of the water quality standards.

(b) The protection goal for fish is to establish and retain vegetation consistent with the vegetation retention objectives described in OAR 629-640-0000 (streams), 629-645-0000 (significant wetlands), and 629-650-0000 (lakes) that will maintain water quality and provide aquatic habitat components and functions such as shade, large wood, and nutrients.

(c) The protection goal for wildlife is to establish and retain vegetation consistent with the vegetation retention objectives described in OAR 629-640-0000 (streams), 629-645-0000 (significant wetlands), and 629-650-0000 (lakes) that will maintain water quality and habitat components such as live trees of various species and size classes, shade, snags, downed wood, and food within riparian management areas. For wildlife species not necessarily reliant upon riparian areas, habitat in riparian management areas is also emphasized in order to capitalize on the multiple benefits of vegetation retained along waters for a variety of purposes.

Or. Admin. R. 629-635-0110 Monitoring

(1) Monitoring and evaluation of the water protection rules are necessary because of the innovative approach taken in the rules. Monitoring and evaluation are needed to increase the level of confidence of all concerned that the rules will maintain and improve the condition of the riparian vegetation and waters of the state over time.

(2) In cooperation with state and federal agencies, landowners and other interested parties, the department shall conduct monitoring on a continuing

basis to evaluate the effectiveness of the water protection rules. The monitoring shall determine the effectiveness of the rules to meet the goals of the Forest Practices Act and the purposes stated in the rules, as well as their workability and operability.

(3) It is the Board of Forestry's intent that the department and its cooperators place a high priority on assessing the monitoring needs and securing adequate resources to conduct the necessary monitoring. The department shall work with its cooperators and the Legislature to secure the necessary resources, funding and coordination for effective monitoring.

(4) The department shall report to the Board of Forestry annually about current monitoring efforts and, in a timely manner, present findings and recommendations for changes to practices. The Board of Forestry shall consider the findings and recommendations and take appropriate action.

Or. Admin. R. 629-635-0130 Written Plans for Streams, Lakes, Wetlands and Riparian Management Areas

(1) Operators shall submit to the State Forester a written plan before conducting any operation requiring notification under OAR 629-605-0140(1) within:

(a) 100 feet of fish use or domestic water use streams (classified as Type F or Type D under OAR 629-635-0200), except as described in section (3) of this rule;

(b) 300 feet of significant wetlands;

(c) 100 feet of large lakes.

(2) In addition to the written plan requirements in OAR 629-605-0170, operators shall specifically describe in the written plan for operations within 100 feet of domestic water use portions of Type F or D streams the practices and methods that will be used to prevent sediment from entering waters of the state.

(3) The State Forester may waive, in writing, the requirement for a written plan within 100 feet of a Type F or Type D stream, if the State Forester determines the intended forest practice will not directly affect the physical components of the riparian management area. "Physical components" means materials such as, but not limited to, vegetation, snags, rocks, and soil. "Directly affect" means that physical components will be moved, disturbed, or otherwise altered by the operation activity, even if only temporarily.

(4) Written plans required under section (1)(a) and (1)(b) of this rule are subject to the process required for a written plan pursuant to ORS 527.670(8) through (12), and appeal pursuant to 527.700.

Or. Admin. R. 629-670-0000 Purpose

OAR 629-670-0000 through 629-670-0350 shall be known as the Oregon Forest Practices Act Enforcement and Civil Penalty Rules. These rules direct the State Forester to take fair and uniform enforcement action when there is a violation of the Oregon Forest

Practices Act. OAR 629-670-0300 and 629-670-0310 provide an outline of contested case hearings procedures, with specific contested case rules in OAR chapter 629, division 1 and OAR chapter 137, division 3.

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Nos. 11-338 and 11-347

In the Supreme Court of the United States

DOUG DECKER, IN HIS OFFICIAL CAPACITY AS OREGON STATE FORESTER, ET AL., PETITIONERS

v.

NORTHWEST ENVIRONMENTAL DEFENSE CENTER, RESPONDENT

GEORGIA-PACIFIC WEST, INC., ET AL., PETITIONERS

v.

NORTHWEST ENVIRONMENTAL DEFENSE CENTER, RESPONDENT

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

JOINT APPENDIX – VOLUME II

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PETITIONS FOR CERTIORARI FILED SEPTEMBER 13, 2011
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DISTRICT OF OREGON

NORTHWEST ENVIRONMENTAL DEFENSE CENTER, an Oregon non-profit corporation,

Plaintiff,

v.

MARVIN BROWN, Oregon State Forester, in his official capacity; **STEPHEN HOBBS, BARBARA CRAIG, DIANE SNYDER, LARRY GIUSTINA, CHRIS HEFFERNAN, WILLIAM HUTCHISON, AND JENNIFER PHILLIPPI,** members of the Oregon Board of Forestry, in their official capacities; **HAMPTON TREE FARMS, INCORPORATED**, an Oregon domestic business corporation; **STIMSON LUMBER COMPANY**, an Oregon domestic business corporation; **GEORGIA-PACIFIC WEST, INCORPORATED**, an Oregon domestic business corporation; and **SWANSON GROUP, INCORPORATED**, an Oregon domestic business corporation,

Defendants.

Case No.: 06-1270-KI

FIRST AMENDED COMPLAINT

I. INTRODUCTION

1. This action is a citizen suit brought under Section 505 of the Clean Water Act ("CWA" or "Act"), 33 U.S.C. §1365. Plaintiff Northwest Environmental Defense Center ("NEDC") seeks injunctive relief, a declaratory judgment, the imposition of civil penalties, and an award of costs, including attorneys' and expert witness fees, for Defendants' repeated and ongoing violations of the CWA.

2. This lawsuit concerns Defendants' ongoing discharges of pollutants and/or industrial stormwater from ditches, channels, culverts, pipes and other "point sources" along the Trask River and Sam Downs roads in the Tillamook State Forest. The section of the Trask River Road at issue generally runs along the west side of the South Fork Trask River, between the first road bridge that crosses the South Fork Trask River south of the North Fork Trask River and the confluence of the South Fork Trask River and Edwards Creek ("Trask River Road"). *See* Exhibit 1, Appendix 1. The section of the Sam Downs Road at issue generally runs along the Little South Fork of the Kilchis River approximately 2.7 road miles to approximately 4.1 road miles northeast of the Mapes Creek boat ramp, out the Kilchis River and Sam Downs roads ("Sam Downs Road"). *See* Exhibit 1, Appendix 2.

3. Like many logging roads in Oregon State Forests, the Trask River Road and Sam Downs Road were designed and constructed, and are currently maintained by Defendants, to collect, channel, and then deliver stormwater to rivers and streams. The stormwater discharged from these roads is polluted with sediment and other pollutants; consequently, these discharges degrade water quality, contribute to the destruction of salmonid habitat, and adversely impact a wide variety of aquatic life. None of the discharges is authorized by a National Pollutant

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Discharge Elimination System ("NPDES") permit issued pursuant to Section 402 of the Act, 33 U.S.C. §1342.

4. Plaintiff alleges that Defendants' unauthorized discharges of polluted stormwater are illegal and in violation of Sections 301(a) and 402 of the Act, 33 U.S.C. §§1311(a) and 1342. As relevant here, Section 301(a) prohibits the "discharge of pollutants" by any person unless in compliance with Section 402. Section 402(a) empowers the U.S. Environmental Protection Agency ("EPA") to issue NPDES permits authorizing "discharges of pollutants." Therefore, one way Defendants could comply with Section 301(a) would be to obtain and comply with NPDES permits authorizing their "discharges of pollutants." *See* 33 U.S.C. §1311(a) and §1342(k). Alternatively, Defendants' discharges are subject to Section 402(p) of the Act, 33 U.S.C. §1342(p)—which requires NPDES permits for "stormwater discharges associated with industrial activities" (hereafter "industrial stormwater")—because Defendants' maintenance of and timber hauling on the Trask River Road and Sam Downs Road constitute "industrial activities" under 40 C.F.R. 122.26(b)(14). If Section 402(p) applies to Defendants' discharges, Defendants could comply with Sections 301(a) and 402(p) by obtaining NPDES permits authorizing their discharges of industrial stormwater. Without NPDES permits, Defendants' discharges of pollutants and/or industrial stormwater from the Trask River Road and Sam Downs Road are unauthorized and in violation of the Act.

5. The Oregon Department of Forestry and the Oregon Board of Forestry are responsible for these discharges because they own, operate, maintain and/or control the logging roads in Oregon State Forests. Hampton Tree Farms, Incorporated ("Hampton Tree Farms"), Stimson Lumber Company, Georgia-Pacific West, Incorporated ("Georgia-Pacific West"), and Swanson Group, Incorporated ("Swanson Group"), are responsible for the discharges because

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they haul timber on the roads—an industrial activity that grinds up the road surface and creates much of the sediment and other pollutants delivered to rivers and streams—and because their timber sale contracts with the Oregon Department of Forestry obligate them to maintain the roads on which they haul.

6. Plaintiff also alleges that Defendants have violated the Act by failing to apply for NPDES permits for their discharges from the Trask River Road, the Sam Downs Road, and the hundreds of other locations throughout Oregon State Forests where logging roads deliver pollutants and/or industrial stormwater to rivers and streams.

II. JURISDICTION AND VENUE

7. This Court has jurisdiction pursuant to 33 U.S.C. §1365 (CWA citizen suit provision) and 28 U.S.C. §1331 (federal question). Defendants are in violation of an "effluent standard or limitation" as defined by Section 505 of the Act, 33 U.S.C. §1365. The requested relief is proper under 28 U.S.C. §§2201 and 2202, and 33 U.S.C. §1365.

8. Plaintiff has satisfied the jurisdictional requirements for bringing this suit. Under Section 505(b)(1)(A) of the Act, 33 U.S.C. §1365(b)(1)(A), by certified letter dated and postmarked June 19, 2006, NEDC notified Defendants of their violations of the Act and of NEDC's intent to sue for those violations ("Notice Letter"). Additionally, by certified letter dated and postmarked July 21, 2006, NEDC sent a second notice letter ("Second Notice Letter") to Swanson Group, notifying Swanson Group of its violations of the Act and of NEDC's intent to sue for those violations. Copies of the Notice Letter and Second Notice Letter are attached to this complaint as Exhibits 1 & 2. Plaintiff notified the Administrator of the EPA, the Administrator of EPA Region 10, and the Director of the Oregon Department of Environmental Quality ("ODEQ") of its intent to sue Defendants by mailing copies of the Notice Letter to those

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officials on June 19, 2006 and by mailing copies of the Second Notice Letter to those officials on July 21, 2006.

9. More than sixty days have passed since the Notice Letter and Second Notice Letter were served and the violations complained of are continuing or reasonably likely to continue to occur. Defendants are in violation of the Clean Water Act. Neither the EPA nor the ODEQ has commenced any action constituting diligent prosecution to redress these violations.

10. Venue is appropriate in the District of Oregon under Section 505(c)(1) of the Act, 33 U.S.C. §1365(c)(1), because sources of the violations complained of are located in this District, in Tillamook County, Oregon.

11. A copy of the Complaint was served, and a copy of this First Amended Complaint is being served, upon the Attorney General of the United States, the Administrator of the EPA, and the Administrator of EPA Region 10, as required by 33 U.S.C. §1365(c)(3) and 40 C.F.R. 135.4.

III. PARTIES

12. Plaintiff Northwest Environmental Defense Center is a membership organization suing on behalf of itself and its members. NEDC is an independent non-profit corporation organized and existing under the laws of the State of Oregon. NEDC maintains its principal place of business in Multnomah County, Oregon. Since 1969, the staff, student volunteers, and members of NEDC have advocated for cleaner water and air and for the preservation of public lands and wildlife habitat across the Pacific Northwest.

13. The mission of NEDC is to protect and conserve the environment and natural resources of the Pacific Northwest. NEDC and its members have a particular interest in, and derive aesthetic, recreational, and other benefits from, Oregon's rivers, streams, lakes, and

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bays—including Tillamook Bay, the Trask River, the South Fork Trask River, the Kilchis River, the Little South Fork of the Kilchis River, and the waters tributary to them—as well as the aquatic species that use and rely on those waters. NEDC and its members work to conserve and protect Oregon's water resources and aquatic species. NEDC's members use waters and adjacent lands downstream from Defendants' discharges for recreational and other activities, including boating, fishing, nature watching, hiking, and aesthetic and recreational enjoyment. NEDC's members use and enjoy the Trask and Kilchis rivers, as well as waters that are tributary to those rivers, for fishing, recreation and other activities. Additionally, many members of NEDC live or work near Oregon waters or otherwise have an interest in Oregon waters. NEDC and its members intend to continue all of these activities in the future.

14. NEDC has standing to bring this lawsuit. NEDC and its members are "citizens" as defined by Section 505(g) of the Act, 33 U.S.C. §1365(g). NEDC has at least one member who is injured by Defendants' discharges of pollutants and stormwater. Recreational, economic, aesthetic, conservation, health, and/or other interests of NEDC and its members have been, are being, and will be adversely affected by Defendants' unauthorized discharges of pollutants and/or industrial stormwater to the Kilchis and Trask river systems. Plaintiff's and its members' interests in the Trask River, the South Fork Trask River, the Kilchis River, the Little South Fork of the Kilchis River, Tillamook Bay, and the waters tributary to those waters are diminished by their polluted state and by Defendants' unauthorized and illegal discharges of pollutants and/or industrial stormwater. The relief sought in this lawsuit can redress the injuries to these interests.

15. Defendant Brown is the Oregon State Forester and the administrative chief of the Oregon Department of Forestry ("ODF"). Defendant Brown is authorized to act on all matters pertaining to forestry in Oregon, including collecting and sharing information about the

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conditions of Oregon's forests, protecting and conserving forest resources, and managing 780,000 acres of state-owned forests. As Oregon State Forester and head of ODF, Defendant Brown is responsible for ensuring that discharges of pollutants and/or industrial stormwater from logging roads in Oregon State Forests comply with the CWA.

16. Defendants Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, and Phillippi are members of the Oregon Board of Forestry ("OBF"), which supervises all matters of forest policy within Oregon, appoints the State Forester, adopts rules regulating forest practices, and provides general supervision of the State Forester's duties in managing the Oregon Department of Forestry. As members of the OBF, Defendants Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, and Phillippi are responsible for ensuring that discharges of pollutants and/or industrial stormwater from logging roads in Oregon State Forests comply with the CWA.

17. Defendant Hampton Tree Farms, Incorporated, is a domestic business corporation organized and existing under the laws of the State of Oregon. Hampton Tree Farms purchased the Ed's BSM, Toll, and Yellow Bus timber sales from ODF and is harvesting timber in the Tillamook State Forest. Hampton Tree Farms and/or its authorized agent is hauling timber along the Trask River Road in the Tillamook State Forest in Tillamook County, Oregon.

18. Defendant Stimson Lumber Company is a domestic business corporation organized and existing under the laws of the State of Oregon. Stimson Lumber Company purchased the Gold Peak and Miller timber sales from ODF and is harvesting timber in the Tillamook State Forest. Stimson Lumber Company and/or its authorized agent is hauling timber along the Trask River Road in the Tillamook State Forest in Tillamook County, Oregon.

19. Defendant Georgia-Pacific West, Incorporated, is a domestic business corporation organized and existing under the laws of the State of Oregon. Georgia-Pacific West purchased

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the Klahnberry timber sale from ODF and is harvesting timber in the Tillamook State Forest. Georgia-Pacific West and/or its authorized agent is hauling timber along the Sam Downs Road in the Tillamook State Forest in Tillamook County, Oregon.

20. Defendant Swanson Group, Incorporated, is a domestic business corporation organized and existing under the laws of the State of Oregon. Swanson Group purchased the Mutt Peak timber sale from ODF and is harvesting timber in the Tillamook State Forest. Swanson Group and/or its authorized agent is hauling timber along the Sam Downs Road in the Tillamook State Forest in Tillamook County, Oregon.

21. Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, and Phillippi are being sued in their official capacities.

IV. STATUTORY BACKGROUND

A. The CWA Generally Prohibits the Addition of Pollutants from Point Sources to Waters of the United States.

22. Congress enacted the Clean Water Act to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. §1251(a). In doing so, Congress declared a national goal of eliminating discharges of pollutants to navigable waters by 1985.

23. As relevant here, Section 301(a) of the Act, 33 U.S.C. §1311(a), prohibits "the discharge of any pollutant by any person" unless such discharge is authorized by or in compliance with Section 402 of the Act, 33 U.S.C. §1342. Section 402(a) of the Act authorizes EPA, under certain conditions, to issue NPDES permits for discharges of pollutants. 33 U.S.C. §1342(a).

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24. Federal and state regulations require any person who discharges or proposes to discharge pollutants to waters of the United States to apply for a NPDES permit. 40 C.F.R. 122.21(a); OAR 340-045-0015(2) & (5).

25. The Act defines the term "person" to mean "an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body." 33 U.S.C. §1362(5).

26. The Act defines the term "discharge of a pollutant" to mean, in part, "any addition of any pollutant to navigable waters from any point source...." 33 U.S.C. §1362(12). By regulation, EPA defined "discharge of a pollutant" to include "additions of pollutants into waters of the United States" from "surface runoff which is collected or channelled [sic] by man" and "discharges through pipes, sewers, or other conveyances owned by a State ... which do not lead to a treatment works...." 40 C.F.R. 122.2.

27. The Act and its implementing regulations do not define the term "addition." One court recently found that "addition" generally means the introduction of a pollutant into navigable waters from any place outside the particular water body. *Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, 273 F.3d 481, 491 (2nd Cir. 2001).

28. The Act defines the term "pollutant" to mean, in part, "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." 33 U.S.C. §1362(6).

29. The Act defines the term "navigable waters" to mean "the waters of the United States, including the territorial seas." 33 U.S.C. §1362(7).

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30. The Act defines the term "point source" to mean, in part, "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. §1362(14).

31. Unlike point source additions of pollutants to U.S. waters, "non-point sources" of pollution do not require NPDES permits. Instead, Section 304(f) of the Act, 33 U.S.C. §1314(f), directs EPA to disseminate information regarding non-point pollution sources, which are generally subject to state management programs developed under Sections 208 and 303(e) of the Act, 33 U.S.C. §§1288 and 1313(e). The Act and its implementing regulations do not define the term "non-point source." "Non-point source" pollution is generally understood to be diffuse run-off and other pollution that is not delivered to water bodies through a "point source."

B. EPA or a Delegated State May Authorize Discharges of Pollutants.

32. EPA may delegate administration of the NPDES permit program to states with regulatory programs meeting applicable criteria. 33 U.S.C. §1342(b); 40 C.F.R. Part 123. The State of Oregon has established a federally approved state NPDES program administered by the ODEQ. *See* OAR Chapter 340-045. Accordingly, the ODEQ may issue general and individual NPDES permits authorizing discharges of pollutants or industrial stormwater.

33. Compliance with a NPDES permit is deemed compliance with the general discharge prohibition in Section 301(a). 33 U.S.C. §1342(k).

34. A discharge of a pollutant is prohibited if EPA or a delegated state decides not to authorize the discharge by issuing a NPDES permit. 33 U.S.C. §1311(a).

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C. Discharges of Pollutants from Logging Roads Are Not Exempt from the NPDES Permit Requirement.

35. Congress has chosen to exempt certain pollutants, point sources, and activities from the requirement to obtain NPDES permits.

36. Section 402(l) of the Act, 33 U.S.C. §1342(l) (entitled "Limitation on permit requirement"), explicitly exempts from the NPDES permit requirement discharges composed entirely of return flows from irrigated agriculture and certain stormwater discharges associated with mining operations and oil and gas exploration. Section 402(l) does not exempt from the NPDES permit requirement any discharges of pollutants or industrial stormwater from logging roads.

37. The Act's definition of the term "pollutant" explicitly excludes certain wastes associated with vessels and oil and gas production. 33 U.S.C. §1362(6). The Act's definition of "pollutant" does not exclude sediment or industrial stormwater discharged from logging roads.

38. The Act's definition of the term "point source" explicitly excludes discharges of agricultural stormwater and return flows from irrigated agriculture. 33 U.S.C. §1362(14). The Act's definition of "point source" does not exclude ditches, pipes, culverts, channels or other discernible, confined, and discrete conveyances associated with logging roads.

39. EPA regulations require NPDES permits for "silvicultural point sources." 40 C.F.R. 122.27(a). According to EPA, "silvicultural point source means any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States." 40 C.F.R. 122.27(b).

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40. According to EPA, the term "silvicultural point source" "does not include non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff." 40 C.F.R. 122.27(b).

41. The Ninth Circuit Court of Appeals recently held that the list of four silvicultural point source activities identified in 40 C.F.R. 122.27 is not exhaustive and that EPA may not exempt from the NPDES permit requirement discharge locations that clearly meet the statutory definition of "point source." *League of Wilderness Defenders v. Forsgren*, 309 F.3d 1181, 1188 & 1190 (9th Cir. 2002). More recently, a federal district court in California held that conduits and channels associated with a timber company's stormwater runoff collection system need NPDES permits if they meet the statutory definition of "point source." *Environmental Protection Information Center v. Pacific Lumber Company*, 301 F.Supp.2d 1102, 1113 (N.D. Cal. 2004).

42. Discharges of pollutants from logging roads are illegal unless authorized by NPDES permits.

D. Stormwater Discharges Associated with Industrial Activity Must Be Authorized by NPDES Permits.

1. Section 402(p) of the Clean Water Act.

43. In 1987, in response in part to EPA's failure to implement the NPDES permit program for stormwater discharges, Congress enacted the supplemental stormwater permitting program in Section 402(p), 33 U.S.C. §1342(p).

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44. Section 402(p)(1) temporarily exempted discharges composed entirely of stormwater from the NPDES permit requirement. By statutory directive, the temporary exemption in Section 402(p)(1) expired on October 1, 1994.

45. Section 402(p)(2) excluded five categories of stormwater discharges—including stormwater discharges associated with industrial activities—from the temporary exemption in Section 402(p)(1). Consequently, discharges of industrial stormwater were still prohibited unless authorized by and in compliance with a NPDES permit. 40 C.F.R. 122.26(a)(1). Section 402(p)(2) requires dischargers of industrial stormwater to obtain NPDES permits.

46. Under Section 402(p)(3), permits for discharges of industrial stormwater must meet the requirements of Sections 301 and 402.

47. To ensure the timely development of NPDES permits for discharges of industrial stormwater, Section 402(p)(4) established deadlines for: 1) EPA's issuance of regulations relating to permit applications for industrial stormwater discharges; 2) the submittal of applications by industrial dischargers; 3) the approval or denial of permit applications by EPA; and 4) compliance with the NPDES permits authorizing discharges of industrial stormwater.

48. Section 402(p)(5) then directed EPA to conduct a study for purposes of: 1) identifying categories of stormwater discharges subject to the temporary exemption in Section 402(p)(1); 2) determining the nature and extent of pollutants in those discharges; and 3) establishing procedures and methods to control those discharges to the extent necessary to mitigate impacts on water quality.

49. Section 402(p)(6) directed EPA to issue regulations, based on the Section 402(p)(5) study, that designate stormwater discharges needing regulation to protect water quality and that establish a comprehensive program to regulate such designated sources. Section

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402(p)(6) required EPA to establish priorities, requirements for State stormwater management programs, and expeditious deadlines. Section 402(p)(6) also authorized EPA to include performance standards, guidelines, guidance, management practices, and treatment requirements in its program.

50. After October 1, 1994, Section 402(p) does not exempt any point source discharge of pollutants or polluted storm water from the requirement of having an NPDES permit.

2. EPA's stormwater regulations.

51. As directed by Section 402(p), EPA promulgated stormwater regulations in 1990 and 1999. *See* 40 C.F.R. 122.26; 55 FR 47,990 (November 16, 1990); and 64 FR 68,722 (December 8, 1999). EPA's stormwater regulations require dischargers of industrial stormwater to apply for an individual permit or seek coverage under a promulgated stormwater general permit by October 1, 1992 or before commencing a discharge. 40 C.F.R. 122.26(c) & (e)(1)(i); *see also* OAR 340-045-0015(2) & (5).

52. EPA determined in its stormwater regulations that "The term [storm water discharge associated with industrial activity] does not include discharges from facilities or activities excluded from the NPDES program under this part 122." 40 C.F.R. 122.26(b)(14).

53. EPA also determined in its stormwater regulations that "Facilities classified as Standard Industrial Classifications 24 (except 2434)..." are considered to be engaging in "industrial activity" for purposes of the term "storm water discharge associated with industrial activity." *See* 40 C.F.R. 122.26(b)(14)(ii). Logging activities are classified as Standard Industrial Code ("SIC") 2411. SIC 2411 is a subcategory of SIC 24.

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V. FACTS

A. Many Logging Roads, Including Roads in the Tillamook State Forest, Discharge Polluted Stormwater Directly to Streams.

54. According to Figure 2-5 on page 14 of Chapter 2 of the *2000 National Water Quality Inventory*, EPA found that forestry-related sediment is the fifth leading source of water quality impairment to rivers and streams nationwide.

55. In the western United States, roads are the primary source of sediment delivered to streams from forestry activities. Logging roads generally use road grade, ditches, channels, and culverts to move stormwater off the road. Ditches, channels, and culverts associated with logging roads often convey and deliver collected stormwater into existing streams and rivers. Stormwater associated with logging roads often contains sediment. Roads located on steep slopes or adjacent to streams pose the greatest risk of sediment delivery to streams.

56. On page 7 of a 1998 report commissioned by ODF and entitled *Forest Road Sediment and Drainage Monitoring Project Report for Private and State Lands in Western Oregon*, Arne Skaugset and Marganne M. Allen of the Forest Engineering Department at Oregon State University concluded that, "[o]f the 285 miles (1,506,067 feet) of forest road surveyed in the five georegions, 25 percent drained directly to streams and another 6 percent were rated 'possible' for sediment delivery."

57. On page 11 of a June 1997 report entitled *Forest Roads, Drainage, and Sediment Delivery in the Kilchis River Watershed* ("Kilchis Roads Study"), ODF found that 25% of the road system in the Kilchis River watershed was clearly delivering flow and sediment to streams and that an additional 14% of the road system was possibly delivering flow and sediment to streams. Table 1 on page 11 of the Kilchis Roads Study notes a positive delivery to channels

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from 459 different discharge points along 219,757 feet of road. Additionally, Table 1 on page 11 of the Kilchis Roads Study indicates that 224 of the identified discharge points were "live stream culverts." Live stream culverts are locations where stormwater ditches join a flowing stream that then flows through a culvert and underneath a road.

58. On page 13 of the November 1998 *Trask Watershed Assessment*, a report of the Tillamook Bay National Estuary Project, the authors of that report state that the "number of miles of unpaved road per square mile of land is a good indication of the level of effects of forest roads on the watershed. A high density (greater than 2 mi/square mile) is indicative of possible elevated sediment delivery. These figures show that all five of the heavily forested subwatersheds have road densities above the cutoff figure and are thus at risk for elevated erosion due to roads."

59. On page 14 of the November 1998 *Trask Watershed Assessment*, the authors state that the "East Fork of the South Fork and the South Fork subwatersheds have the highest areas of potential road erosion. Fish habitat values in these systems are high and this suggests that road remediation work should be focused in these two subwatersheds."

60. On page 2 of the Kilchis Roads Study, ODF stated that "[t]raffic on gravel surface roads also increases the potential for sediment delivery to streams."

B. Pollutants and Stormwater from Logging Roads Severely and Negatively Impact the Environment.

61. Salmon and trout can be adversely affected by turbidity and the addition of sediment to streams. On page 57 of the October 1998 *Kilchis Watershed Analysis*, a report of the Tillamook Bay National Estuary Project, the authors of that report note that, "[t]he negative effects of increased sediment generation include: fine sediment deposition in spawning gravels

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that can smother salmonid eggs, reduce[d] intergravel oxygen, increased turbidity in the water column that can interfere with sight-feeding by salmonids, direct burial of macroinvertebrate insects and their habitat, and bed aggradation throughout the stream network including accumulation of sediment in low gradient channels causing bank erosion and impairing navigation."

62. Both the Trask and Kilchis rivers support fish species that are in decline or are listed as "species of concern." On page 113 of the *Kilchis Watershed Analysis*, the authors of that report note that only one of the five Tillamook Basin salmonid populations is currently healthy.

C. Defendants Are Discharging Pollutants and/or Industrial Stormwater From Logging Roads To U.S. Waters Without NPDES Permits.

63. Every day on which there is 0.12 inches of precipitation or more at the Trask River Road, stormwater lands on or near the Trask River Road and is collected in man-made roadside ditches, conveyed via man-made roadside ditches, channels, culverts and other mechanisms at locations identified in the Notice Letter, and then added to unnamed streams and the South Fork Trask River, which are tributary to the Trask River and Tillamook Bay.

64. Every day on which there is 0.12 inches of precipitation or more at the Sam Downs Road, stormwater lands on or near the Sam Downs Road and is collected in man-made roadside ditches, conveyed via man-made roadside ditches, channels, culverts and other mechanisms at locations identified in the Notice Letter and Second Notice Letter, and then added to unnamed streams and the Little South Fork of the Kilchis River, which are tributary to the Kilchis River and Tillamook Bay.

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65. Stormwater added to the unnamed streams and the South Fork Trask River from the Trask River Road, and stormwater added to the unnamed streams and the Little South Fork of the Kilchis River from the Sam Downs Road, contain "pollutants" including sediment.

66. The South Fork Trask River, the Trask River, the Little South Fork of the Kilchis River, the Kilchis River, Tillamook Bay, and the unnamed streams tributary to those waters are "navigable waters" and/or "waters of the United States" as defined by the Clean Water Act and its implementing regulations.

67. The ditches, culverts, channels, pipes and other mechanisms that convey and add stormwater and pollutants from the Trask River Road to the unnamed streams and the South Fork Trask River, and the ditches, culverts, channels, pipes and other mechanisms that convey and add stormwater and pollutants from the Sam Downs Road to the unnamed streams and the Little South Fork of the Kilchis River, are "point sources." The Notice Letter and Second Notice Letter identify some of the locations of these point sources. *See* Exhibits 1 & 2.

68. Stormwater that is collected, conveyed, and delivered to waters of the United States by ditches, culverts, channels, pipes and other mechanisms along the Trask River Road, the Sam Downs Road, and other logging roads in Oregon State Forests, is not "natural runoff."

69. The Oregon State Forester is the owner or operator of a facility or activity subject to regulation under the NPDES program. The Oregon State Forester owns, operates, maintains, and/or controls logging roads in Oregon State Forests, including the Trask River Road and Sam Downs Road.

70. The Oregon Department of Forestry is the owner or operator of a facility or activity subject to regulation under the NPDES program. The Oregon Department of Forestry

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owns, operates, maintains, and/or controls logging roads in Oregon State Forests, including the Trask River Road and Sam Downs Road.

71. The Oregon Board of Forestry is the owner or operator of a facility or activity subject to regulation under the NPDES program. The Oregon Board of Forestry owns, operates, maintains, and/or controls logging roads in Oregon State Forests, including the Trask River Road and Sam Downs Road.

72. Defendant Hampton Tree Farms is the owner or operator of a facility or activity subject to regulation under the NPDES program. Defendant Hampton Tree Farms maintains, and/or is responsible for maintaining, parts of the stormwater collection system along the Trask River Road. Additionally, Defendant Hampton Tree Farms and/or its authorized agent hauls timber on the Trask River Road. Defendant Hampton Tree Farms and/or its authorized agent intends to continue maintaining and hauling timber on the Trask River Road.

73. Defendant Stimson Lumber Company is the owner or operator of a facility or activity subject to regulation under the NPDES program. Defendant Stimson Lumber Company maintains, and/or is responsible for maintaining, parts of the stormwater collection system along the Trask River Road. Additionally, Defendant Stimson Lumber Company and/or its authorized agent hauls timber on the Trask River Road. Defendant Stimson Lumber Company and/or its authorized agent intends to continue maintaining and hauling timber on the Trask River Road.

74. Defendant Georgia-Pacific West is the owner or operator of a facility or activity subject to regulation under the NPDES program. Defendant Georgia-Pacific West maintains, and/or is responsible for maintaining, parts of the stormwater collection system along the Sam Downs Road. Additionally, Defendant Georgia-Pacific West and/or its authorized agent hauls

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timber on the Sam Downs Road. Defendant Georgia-Pacific West and/or its authorized agent intends to continue maintaining and hauling timber on the Sam Downs Road.

75. Defendant Swanson Group is the owner or operator of a facility or activity subject to regulation under the NPDES program. Defendant Swanson Group maintains, and/or is responsible for maintaining, parts of the stormwater collection system along the Sam Downs Road. Additionally, Defendant Swanson Group and/or its authorized agent hauls timber on the Sam Downs Road. Defendant Swanson Group and/or its authorized agent intends to continue maintaining and hauling timber on the Sam Downs Road.

76. If discharges of stormwater from the Trask River Road and Sam Downs Road are subject to Section 402(p) of the Act, those discharges are "stormwater discharges associated with industrial activity" as defined by the Clean Water Act and its implementing regulations.

77. Defendants have not applied for or received NPDES permit coverage for their discharges of pollutants and/or industrial stormwater from the Trask River Road, the Sam Downs Road, or any other logging road in Oregon State Forests.

78. Defendants' unpermitted discharges of pollutants and/or industrial stormwater degrade the environment and the water quality of Oregon's water resources.

79. Defendants' unpermitted discharges of pollutants and/or industrial stormwater were avoidable had Defendants been diligent in overseeing and controlling operations, maintenance, monitoring, and compliance with federal law.

80. Defendants have benefited economically as a consequence of their unpermitted discharges of pollutants and/or industrial stormwater.

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81. Any and all additional violations by Defendants of the Clean Water Act, which occur or are discovered after those described in the Notice Letter and Second Notice Letter but before a final decision in this action, are continuing violations subject to this complaint.

82. Without the imposition of appropriate civil penalties and/or the issuance of an injunction and other relief, Defendants are likely to continue to violate the Clean Water Act to the further injury of Plaintiff, its members, and others.

VI. CAUSES OF ACTION

First Claim for Relief
(CWA claim against Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, Phillippi, Hampton Tree Farms, Incorporated, and Stimson Lumber Company)

83. Plaintiff hereby alleges and incorporates by reference all of the preceding paragraphs.

84. Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, Phillippi, Hampton Tree Farms, Incorporated, and Stimson Lumber Company are "persons" within the meaning of Section 301(a) of the Clean Water Act, 33 U.S.C. §1311(a), and are subject to suit under the Act's citizen suit provision, 33 U.S.C. §1365.

85. Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, Phillippi, Hampton Tree Farms, Incorporated, and Stimson Lumber Company have violated and are violating Sections 301(a) and 402 of the Clean Water Act, 33 U.S.C. §§1311(a) and 1342, and an "effluent standard or limitation" as defined by Section 505 of the Act, 33 U.S.C. §1365, by discharging pollutants and/or industrial stormwater from point sources along the Trask River Road to waters of the United States without NPDES permits. These violations are ongoing, are described in part in part II.B. of the Notice Letter, and are hereby incorporated by reference as if fully set forth herein. *See* Exhibit 1.

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86. In addition to the violations described in the Notice Letter, Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, Phillippi, Hampton Tree Farms, Incorporated, and Stimson Lumber Company have violated Sections 301(a) and 402 of the CWA, 33 U.S.C. §§1311(a) and 1342, and an "effluent standard or limitation" as defined by Section 505 of the Act, 33 U.S.C. §1365, by discharging pollutants and/or industrial stormwater from point sources along the Trask River Road to waters of the United States without NPDES permits during the following periods:

Period of Violation	Daily Inches of Rainfall
9/18/06	0.71
9/15/06	0.20
9/14/06	0.28
7/30/06	0.24
6/18/06	0.43
6/17/06	0.43
6/16/06	0.20

Second Claim for Relief
(CWA claim against Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, Phillippi, Georgia-Pacific West, Incorporated, and Swanson Group, Incorporated)

87. Plaintiff hereby alleges and incorporates by reference all of the preceding paragraphs.

88. Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, Phillippi, Georgia-Pacific West, Incorporated, and Swanson Group, Incorporated, are "persons" within the meaning of Section 301(a) of the Clean Water Act, 33 U.S.C. §1311(a), and are subject to suit under the Act's citizen suit provision, 33 U.S.C. §1365.

89. Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, Phillippi, Georgia-Pacific West, Incorporated, and Swanson Group, Incorporated, have violated and are violating Sections 301(a) and 402 of the Clean Water Act, 33 U.S.C. §§1311(a) and

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1342, and an "effluent standard or limitation" as defined by Section 505 of the Act, 33 U.S.C. §1365, by discharging pollutants and/or industrial stormwater from point sources along the Sam Downs Road to waters of the United States without NPDES permits. These violations are ongoing, are described in part in parts II.B. of the Notice Letter and Second Notice Letter, and are hereby incorporated by reference as if fully set forth herein. *See* Exhibits 1 & 2.

90. In addition to the violations described in the Notice Letter and Second Notice Letter, Defendants Brown, Hobbs, Craig, Snyder, Giustina, Heffernan, Hutchison, Phillippi, Georgia-Pacific West, Incorporated, and Swanson Group, Incorporated, have violated Sections 301(a) and 402 of the CWA, 33 U.S.C. §§1311(a) and 1342, and an "effluent standard or limitation" as defined by Section 505 of the Act, 33 U.S.C. §1365, by discharging pollutants and/or industrial stormwater from point sources along the Sam Downs Road to waters of the United States without NPDES permits during the following periods:

Period of Violation	Daily Inches of Rainfall
9/18/06	0.74
9/15/06	0.82
9/14/06	
8/30/06	0.13
7/12/06	0.58
6/16/06	0.15
6/15/06	0.12

Third Claim for Relief
(CWA claim against all Defendants)

91. Plaintiff hereby alleges and incorporates by reference all of the preceding paragraphs.

92. Defendants have violated and are violating Sections 301(a) and 402 of the Clean Water Act, 33 U.S.C. §§1311(a) and 1342, and an "effluent standard or limitation" as defined by Section 505 of the Act, 33 U.S.C. §1365, by failing to apply for NPDES permits for their

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discharges of pollutants and/or industrial stormwater from point sources along the Trask River Road, the Sam Downs Road, and other logging roads in Oregon State Forests. These violations are ongoing, are described in part in parts II.C. of the Notice Letter and Second Notice Letter, and are hereby incorporated by reference as if fully set forth herein. *See* Exhibits 1 & 2.

VII. RELIEF REQUESTED

WHEREFORE, Plaintiff respectfully requests that the Court grant the following relief:

A. Issue injunctive relief requiring Defendants to apply for and obtain NPDES permits authorizing their discharges of pollutants and/or industrial stormwater from point sources along the Trask River Road, the Sam Downs Road, and other logging roads in Oregon State Forests;

B. Issue injunctive relief requiring Defendants to remediate the environmental damage and ongoing impacts resulting from their illegal discharges to the Trask and Kilchis River systems;

C. Issue injunctive relief requiring Defendants to develop and comply with appropriate quality assurance procedures to ensure future compliance with the Clean Water Act;

D. Issue injunctive relief ordering Defendants to provide Plaintiff, for a period beginning on the date of the Court's Order and running for two years after Defendants obtain NPDES permit coverage, with copies of all reports and other documents which Defendants submit to the EPA or to the ODEQ regarding Defendants' NPDES permits, at the time the reports or documents are submitted to these authorities;

E. Issue a declaratory judgment that Defendants have violated and continue to be in violation of the Clean Water Act;

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F. Assess civil penalties against Defendants Georgia-Pacific West, Incorporated, Hampton Tree Farms, Incorporated, Stimson Lumber Company, and Swanson Group, Incorporated, as authorized by Section 309(d) of the Act, 33 U.S.C. §1319(d);

G. Award Plaintiff its litigation expenses, including costs and reasonable attorneys' and expert witness fees, as authorized by Section 505(d) of the Act, 33 U.S.C. § 1365(d); and

H. Award such other relief as this Court deems just and appropriate.

RESPECTFULLY SUBMITTED this 20th day of September, 2006.

CASCADE RESOURCES ADVOCACY GROUP

By: /s/ Christopher G. Winter
Christopher G. Winter, OSB# 98435
Ralph Bloemers, OSB #98417

WASHINGTON FOREST LAW CENTER

By: /s/ Paul A. Kampmeier
Paul A. Kampmeier, WSBA #31560
Pro hac vice application pending

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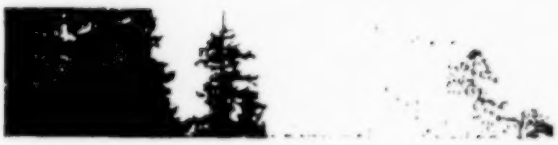

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June 19, 2006

Via Certified Mail - Return Receipt Requested

Mr. Marvin Brown, State Forester
Oregon Department of Forestry
2600 State Street
Salem, Oregon 97310

Mr. Stephen Hobbs, Ms. Barbara Craig, Ms. Diane Snyder
Mr. Larry Giustina, Mr. Chris Heffernan
Mr. William Hutchison, Ms. Jennifer Phillippi, Boardmembers
Oregon Board of Forestry
Oregon Department of Forestry
2600 State Street
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Mr. Thomas Lee, President
Georgia Pacific West
133 Peachtree Street
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Mr. Steven Zika, President & Registered Agent
Hampton Tree Farms
9600 SW Barnes Road, #200
Portland, Oregon 97225

Mr. Andrew Miller
Stimson Lumber Company
520 SW Yamhill Street, Suite 700
Portland, Oregon 97204

Mr. Steven Swanson, President & Registered Agent
Swanson Group Incorporated
2695 Glendale Valley Road
Glendale, Oregon 97442

Re: Notice of Intent to File Suit under the Clean Water Act.

Dear Sirs and Madams:

This letter provides each of you with sixty days' notice of the Northwest Environmental Defense Center's intent to file a citizen suit against you under Section 505 of the Clean Water Act, 33 U.S.C. §1365, for the Clean Water Act violations described herein. The Northwest Environmental Defense Center, 10015 SW Terwilliger Blvd., Portland, Oregon 97219, (503) 768-6673, is a non-profit organization dedicated to protecting the natural environment of the Pacific Northwest. Paul Kampmeier of the Washington Forest Law Center, 615 Second Avenue, Suite 360, Seattle, Washington 98104, (206) 223-4088 x 7, and Chris Winter of the Cascade Resources Advocacy Group, 917 SW Oak, Suite 417, Portland, Oregon 97205, (503) 525-2725, represent NEDC in this matter. Any response to this notice of intent to sue should be directed to counsel for NEDC.

Congress enacted the Clean Water Act in 1948 to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. §1251(a). In doing so, Congress declared a national goal of eliminating discharges of pollutants to navigable waters by 1985. As described more fully in this letter, each of you have violated and are violating the Clean Water Act (see Sections 301 and 402 of the CWA, 33 U.S.C. §§1311 and 1342), by collecting, channeling, and then discharging stormwater associated with industrial activity and/or pollutants from logging roads to the South Fork Trask River, the Little South Fork of the Kilchis River, and other rivers and streams throughout Oregon State Forests.

I. BACKGROUND.

It is widely recognized that the construction, use, and existence of logging roads detrimentally affects stream health and aquatic habitat by increasing sediment delivery and stream turbidity, adversely affecting the survival of dozens of sensitive aquatic biota, including salmon, trout, other native fishes, amphibians, and macro-invertebrates. The adverse environmental effects from logging roads change over time and vary with road location within a watershed, soils, season of construction and use, weather, and other factors. Once roads are built there is also variability based on road use and maintenance practices. What remain constant, however, are the negative impacts to water quality, salmon and other aquatic species.

A. Roads are a main source of sediment affecting aquatic systems.

Forestry-related sediment is the fifth leading source of water quality impairment to rivers and streams nationwide and sedimentation and siltation from all land uses is the leading cause of degraded wetland integrity (USEPA, 2000). In the western United States, roads are the primary source of sediment from forest management activities (Megahan and Ketcheson, 1996). Much forestry-related sediment is delivered episodically via stormwater runoff or road-related landslides. Roads, road construction and logging all cumulatively elevate peak flows, erosion, sediment delivery, turbidity, and sedimentation (Meehan, 1991; Rhodes et al., 1994; UFSF and USBLM, 1997a; Beschta et al., 2004).

Historically, logging roads were intentionally designed to discharge stormwater directly into streams—logging roads utilize ditches, channels, and culverts to move stormwater off the road and into the existing stream network. More recent design standards acknowledge that direct discharges are ecologically undesirable and seek to direct drainage onto porous forest soils for infiltration. However, most forest roads in Oregon were constructed prior to state rules that marginally improved construction standards (ODF Issue Paper, 2000). Consequently, a significant amount of the road networks in most watersheds remain hydrologically connected to streams (Wemple et al., 1996; Rhodes and Huntington, 2000).

Drainage points from logging roads include culverts and cross drains; live stream crossings; waterbars; rolling dips; grade breaks; saddles; and random points of discharge. Roads located on steep slopes or next to streams pose the greatest risk of sediment delivery and adverse impacts to stream habitats. Moreover, "the single greatest factor affecting generation of sediment from road surfaces is the amount of traffic" (Reid and Dunne, 1984). The greater the disturbance area and the closer to streams, the greater the risk of sediment delivery.

B. Logging roads in Oregon discharge stormwater and sediment to streams.

A 1996 Oregon Department for Forestry monitoring report concluded that between 29-39% of active and inactive roads on state and private lands have the potential to deliver sediment to streams (ODF, 1996). This project also found a general lack of stormwater filtering near streams. Other studies confirm the breadth of sediment and stormwater discharges from forest roads in the Pacific Northwest. In one study, 31% of the surveyed road length in five Oregon regions was rated as certain (25%) or possible (6%) to deliver sediment to streams (Skaugset and Allen, 1998). The Skaugset and Allen study likely underestimates the amount of road length contributing sediment to streams because it assumes that all culverts function properly, when in fact contributing road length increases dramatically during large storm events when some culverts fail.

In a separate western Washington study area 75% of road drainage was discharging directly to streams (Reid and Dunne, 1984). Other studies have found that 34% of road drainage points flowed directly to stream channels (Bilby et al., 1989) and that 57.3% of road drainage in the Blue River area in the western Cascades of Oregon delivered either to channels or gullies (Wemple, 1994). Valley bottom roads generally have the highest proportion of road segments connected to streams, although many more miles of upland roads are hydrologically connected to streams.

A recent road-sediment study in the Kilchis watershed in the Tillamook State Forest found that 25-39% of the road system was delivering sediment to streams (ODF, 1997). Although some experts believe the Kilchis numbers underestimate the scope of the problem, even the Kilchis study noted a positive delivery of sediment to stream channels from 459 different discharge points along nearly 42 miles of road. An astounding 224 of the identified discharge points were "live stream culverts"—locations where stormwater ditches joined a flowing stream that then flowed through a culvert underneath a road. Indeed, although Oregon forest practices regulations have since 1978 required operators to locate stormwater management

mechanisms so that stormwater is filtered before entering waters of the state, the Kilchis report found that roads in western Oregon generally, and in the Kilchis watershed specifically, "are not in the condition suggested by this rule". The report ultimately concluded "that [the] roads are designed and maintained for efficient delivery of water to channels."

Conditions on the Trask River are equally troubling. According to the 1998 Trask Watershed Assessment, completed as part of the Tillamook Bay National Estuary Project, the 2.6 miles of road per square mile in the South Fork Trask sub-watershed indicates an elevated risk of erosion due to roads (TBNEP, 1998a). In the South Fork sub-watershed alone there are reported to be approximately 12.6 miles of road contributing sediment to streams; the South Fork is one of two sub-watersheds with the highest area of potential road erosion. The Oregon Department of Environmental Quality confirms the problem and lists the mainstem of the Trask as a waterbody of concern for turbidity and sediment due to an increase in erosion caused by forest roads.

C. Sediment from logging roads diminishes water quality and negatively impacts the habitat of fish, amphibians, and other aquatic species.

Roads have many physical and biological effects that can severely and permanently harm streams and their biota (Furniss et al., 1992; Trombulak and Frissell, 2000; Gucinski et al., 2001). Increased erosion and corresponding increases in sediment delivery and sedimentation contribute to channel simplification, including losses in the depth, frequency, and quality of pools and off-channel habitat critical for fish rearing. Increased sedimentation also contributes to increased levels of fine sediment, which greatly reduces salmonid survival from egg-to-fry life stages. Elevated sediment delivery also increases turbidity that can impair salmonid sight-feeding and cause gill damage—both factors that can contribute to indirect mortality (Rhodes et al., 1994; Lloyd et al., 1987; Newcombe and Jensen, 1996; Wood, 1997).

As noted in the Kilchis Watershed Analysis:

> The negative effects of increased sediment generation include: fine sediment deposition in spawning gravels that can smother salmonid eggs, reduce[d] intergravel oxygen, increased turbidity in the water column that can interfere with sight-feeding by salmonids, direct burial of macroinvertebrate insects and their habitat, and bed aggradation throughout the stream network including accumulation of sediment in low gradient channels causing bank erosion and impairing navigation (TBNEP, 1998b).

Increases in sediment delivery also contribute to increases in width/depth ratios in sensitive streams (Richards, 1982; Rhodes et al., 1994), which inevitably increases summer water temperatures even in the absence of the loss of shade (Beschta et al., 1987; McCullough, 1999).

The most well-known native aquatic species affected by turbidity and sedimentation are salmon and trout; Oregon state lands support coho, chinook, and chum salmon, steelhead, and

cutthroat and rainbow trout. There are also twenty other fishes known or likely to exist in the Tillamook and Clatsop State Forests that are potentially affected by sediment delivery.[1] Additionally, nineteen potentially-affected amphibians are known to exist or likely exist on northwest Oregon state lands.[2]

Indeed, both the Trask and Kilchis Rivers support fish species that are in decline, face significant ecological challenges, or are listed as "species of concern". On the Trask River, Pacific and River Lamprey, coastal cutthroat trout, and chum salmon are all considered "species of concern". Coho salmon and winter steelhead trout have also been listed or proposed for listing under the federal Endangered Species Act. The Kilchis Watershed Analysis notes that only one of the five Tillamook Basin salmonid populations is currently healthy and that the forested upland has been greatly altered by forestry and timber harvest.

Under the state's water quality standards, these species and their habitat are beneficial uses that must be fully protected. The State of Oregon's biological criteria require that water quality must be sufficient to prevent detrimental changes in all resident biological communities, OAR 340-41-0011, including macro-invertebrate communities that often constitute the food source for aquatic species. Yet despite these rules and the acknowledged serious impacts of logging roads, logging road pollution continues to negatively impact water quality and the habitat of fish, amphibians, and other aquatic species on state forest lands.

II. CLEAN WATER ACT VIOLATIONS.

A. Legal background and requirements.

Section 301(a) of the Clean Water Act, 33 U.S.C. §1311(a), prohibits the point source discharge of pollutants to navigable waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit issued pursuant to Section 402 of the Clean Water Act, 33 U.S.C. §1342. Additionally, as required by Section 402(p) of the Clean Water Act, 33 U.S.C. §1342(p), U.S. EPA regulations require NPDES permits for stormwater discharges associated with industrial activity such as logging. 40 C.F.R. 122.26. Point source discharges of industrial stormwater and/or pollutants from forest roads are therefore illegal unless they are in compliance with an NPDES permit.

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[1] These are: Pacific lamprey; Brook lamprey; River lamprey; Coast Range sculpin; Mottled sculpin; Torrent sculpin; Reticulated sculpin; Riffle sculpin; Prickly sculpin; Paiute sculpin; Tui chub; Oregon chub; Northern squawfish; Speckled dace; Longnose dace; Leopard dace; Redside-shiner; Pearmouth; Largescale sucker; and Three-spine stickleback (ODF, 2001).

[2] These are: Northwestern salamander; Long-toed salamander; Cope's giant salamander; Pacific giant salamander; Cascade torrent salamander; Columbia torrent salamander; Southern torrent salamander; Clouded salamander; Oregon slender salamander; Ensatina; Dunn's salamander; Western red-backed salamander; Roughskin newt; Tailed frog; Pacific treefrog; Red-legged frog; Foothill yellow-legged frog; Cascades frog; and Oregon spotted frog (ODF, 2001).

The EPA regulation defining the term "silvicultural point source" does not exempt point source discharges of industrial stormwater and/or pollutants from the requirement to have an NPDES permit. 40 C.F.R. 122.27. The Ninth Circuit Court of Appeals recently held that 40 C.F.R. 122.27 only excludes nonpoint source silvicultural activities from NPDES permit requirements but does not exempt point source discharges like the aerial application of pesticides. *League of Wilderness Defenders v. Forsgren*, 309 F.3d 1181, 1186 (9th Cir. 2002). More recently, a federal district court in California held that conduits and channels associated with a timber company's stormwater runoff collection system need NPDES permits if they meet the statutory definition of "point source". *Environmental Protection Information Center v. Pacific Lumber Company*, 301 F.Supp.2d 1102, 1113 (N.D. Cal. 2004).

B. Unpermitted discharges.

Each of you have violated Section 301(a) of the Clean Water Act and EPA's industrial stormwater regulations by discharging stormwater associated with industrial activity and/or pollutants from point sources along logging roads in Oregon State Forests to navigable waters of the United States without an NPDES permit. Specifically, you have routinely built, maintained, and/or utilized systems of ditches, culverts, channels, and other mechanisms that are designed to and do collect, channel, and discharge industrial stormwater and/or pollutants from logging roads to navigable waters of the United States on each and every day during which there was 0.12 inches or more of precipitation. These unpermitted discharges occur on the logging roads described below and on roads throughout Oregon State Forests. These unpermitted discharges violate the Clean Water Act and are ongoing.

Example #1: The Trask River Road.

Along the section of the Trask River Road that generally runs along the west side of the South Fork Trask River, between the first bridge that crosses the South Fork Trask River south of the North Fork Trask River[3] and the confluence of the South Fork Trask River and Edwards Creek, Hampton Tree Farms, the Stimson Lumber Company, the Swanson Group Incorporated, the Oregon Board of Forestry, the Oregon State Forester, and the Oregon Department of Forestry have utilized a network of ditches, channels, culverts, and other mechanisms to collect, channel, and then discharge stormwater associated with industrial activity and/or pollutants to unnamed streams and the South Fork Trask River, which are tributary to the Trask River and Tillamook Bay. The locations of the point sources from which you are discharging include:

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[3] The bridge marking the north end of the road section at issue is apparently unnamed. The bridge appears to be the first bridge to cross the South Fork Trask River south of the junction of the Trask River Road and the North Fork Trask River Road (or south of the confluence of the north and south forks of the Trask River). The bridge is approximately 0.65 miles before the Trask River Road junctions with the East Fork Trask Road and approximately 1 mile before the Trask River Road junctions with the Edwards Creek Road. Hereafter this bridge will be referred to as the South Fork Bridge. See Appendix 1 for a map showing the approximate location of the Trask River Road section at issue.

- At the west end of the South Fork Bridge, stormwater and/or pollutants are collected in the adjacent parking area and channelized through gullies and ditches down the river bank and into the South Fork Trask River (Trask 1a);

- Immediately upstream (south) of the South Fork Bridge, stormwater and/or pollutants are collected on both sides of the Trask River Road and then routed through ditches and a culvert, down the river bank, and into the South Fork Trask River (Trask 1b);

- Approximately 0.4 miles south of the South Fork Bridge, stormwater and/or pollutants that have been collected and channelized along the side of the road are discharged to an unnamed stream flowing down the hillside, which is tributary to the South Fork Trask River via a culvert under the road (Trask 2);

- Approximately 0.5 miles south of the South Fork Bridge, stormwater and/or pollutants are collected and channelized via a ditch on the river side of the road and then dumped down the river bank and directly into the South Fork Trask River (Trask 3);

- Approximately 0.65 miles south of the South Fork Bridge—at the junction of the East Fork Trask Road and the Trask River Road where there is a bridge crossing the South Fork Trask River, an information sign, and a sign for Lake Tahoe—multiple ditches and channels collect and drain stormwater and/or pollutants to a small stream and to the South Fork Trask River. Specifically,
  a) At the bridge and across the Trask River Road from the bridge, roadside stormwater collection ditches discharge to a small stream that is tributary to the South Fork Trask River via a culvert and ditch (Trask 4a);
  b) Just upstream of the junction of the East Fork Trask Road and the Trask River Road, stormwater and/or pollutants are collected and channelized on the river side of the road and then discharged down the river bank and directly into the South Fork Trask River (Trask 4b); and

- Approximately one mile south of the South Fork Bridge, on the Trask River Road before the junction with the Edwards Creek Road and just before the yellow 1.0 mile marker, roadside stormwater collection ditches discharge stormwater and/or pollutants directly, and via a culvert under the road, to the South Fork Trask River (Trask 5).

You—Hampton Tree Farms, the Stimson Lumber Company, the Swanson Group Incorporated, the Oregon Board of Forestry, the Oregon State Forester, and the Oregon Department of Forestry—have violated Section 301(a) of the Clean Water Act by discharging stormwater associated with industrial activity and/or pollutants from these point sources on the following days:

Table 1: Total Suspended Solids (TSS)

Period of Violation	Discharge Location	Receiving Water TSS (mg/L)	Discharge TSS (mg/L)	Number of Times Over Background
5/23/06	Trask 1a	3.5	250	71
5/23/06	Trask 1b	3.0	270	90
5/23/06	Trask 2		13	
5/23/06	Trask 3	4.5	54	12
5/23/06	Trask 4a	4.0	76	19
4/15/06	Trask 1a	Non-detect	1100	1100
4/15/06	Trask 1b	4.0	68	17
4/14/06	Trask 1a	8.0	2900	363
4/14/06	Trask 1b	Non-detect	560	560
4/14/06	Trask 2	3.0	340	113
4/14/06	Trask 3	Non-detect	3400	3400
4/14/06	Trask 4a	Non-detect	280	280
4/14/06	Trask 5	Non-detect	230	230
4/10/06	Trask 3	Non-detect	2700	2700

Table 2: Turbidity

Period of Violation	Discharge Location	Receiving Water Turbidity (NTU)	Discharge Turbidity (NTU)	Number of Times Over Background
5/23/06	Trask 1a	2.6	320	123
5/23/06	Trask 1b	9.7	800	82
5/23/06	Trask 2		18	
5/23/06	Trask 3	4.0	150	38
5/23/06	Trask 4a	4.7	240	51
4/15/06	Trask 1a	1.2	1100	917
4/15/06	Trask 1b	2.0	98	49
4/14/06	Trask 1a	3.5	3400	971
4/14/06	Trask 1b	9.6	1600	167
4/14/06	Trask 2	8.5	660	78
4/14/06	Trask 3	3.9	3600	923
4/14/06	Trask 4a	9.1	690	76
4/14/06	Trask 5	3.2	650	203

Additionally, you—Hampton Tree Farms, the Stimson Lumber Company, the Swanson Group Incorporated, the Oregon Board of Forestry, the Oregon State Forester, and the Oregon Department of Forestry—have violated Section 301(a) of the Clean Water Act by discharging stormwater associated with industrial activity and/or pollutants to unnamed streams and the South Fork Trask river from the above-described point sources on each and every day during

which there was 0.12 inches or more of precipitation, as indicated in the table attached to this letter at Appendix 3.

Example #2: The Sam Downs Road.

Along the Sam Downs Road,[4] Georgia Pacific West, the Oregon Board of Forestry, the Oregon State Forester, and the Oregon Department of Forestry have utilized a network of ditches, channels, culverts, and other mechanisms to collect, channel, and then discharge stormwater associated with industrial activity and/or pollutants to unnamed streams and the Little South Fork of the Kilchis River, which are tributary to the Kilchis River and Tillamook Bay. The locations of the point sources from which you are discharging include:

- Approximately 2.2 miles past the yellow ½ mile marker that is on the section of the Kilchis River Road that runs along the south and east side of the Kilchis River (the yellow ½ mile marker is past (east of) the Kilchis River/Mapes Creek boat ramp), roadside stormwater collection ditches discharge to a stream that then runs through a black plastic culvert under the road and down the riverbank to the Little South Fork of the Kilchis River (SD 1);

- Approximately 2.35 miles past the yellow ½ mile marker on the Kilchis River Road, roadside stormwater collection ditches discharge to a stream that then runs through a metal culvert under the road and down the riverbank to the Little South Fork of the Kilchis River (SD 2);

- Approximately 2.9 miles past the yellow ½ mile marker on the Kilchis River Road, just upstream of the smolt trap, roadside stormwater collection ditches discharge through a culvert under the road and then through a ditch to the Little South Fork of the Kilchis River (SD 3);

- Approximately 3.4 miles past the yellow ½ mile marker on the Kilchis River Road, roadside stormwater collection ditches discharge through culverts under the road and then dump stormwater and/or pollutants down the steep hillside and riverbank to the Little South Fork of the Kilchis River (SD 4); and

- Approximately 3.6 miles past the yellow ½ mile marker on the Kilchis River Road, there are two culverts with diffusers—the first black plastic and the second metal—dumping stormwater and/or pollutants down the hillside and riverbank to the Kilchis River (SD 5).

You—Georgia Pacific West, the Oregon Board of Forestry, the Oregon State Forester, and the Oregon Department of Forestry—have violated Section 301(a) of the Clean Water Act by discharging stormwater associated with industrial activity and/or pollutants from these point sources on the following days:

---

[4] See Appendix 2 for a map showing the approximate location of the Sam Downs Road section at issue.

Table 1: Total Suspended Solids (TSS)

Period of Violation	Discharge Location	Receiving Water TSS (mg/L)	Discharge TSS (mg/L)	Number of Times Over Background
4/15/06	SD 1	Non-detect	260	260
4/15/06	SD 2	Non-detect	210	210
4/15/06	SD 3	2.0	68	34
4/15/06	SD 5	Non-detect	45	45
3/17/06	SD 1	Non-detect	44	44
3/17/06	SD 2	Non-detect	100	100
3/17/06	SD 3		14	

Table 2: Turbidity

Period of Violation	Discharge Location	Receiving Water Turbidity (NTU)	Discharge Turbidity (NTU)	Number of Times Over Background
4/15/2006	SD 1	6.6	750	114
4/15/2006	SD 2	5.3	870	164
4/15/2006	SD 3	2.1	240	114
4/15/2006	SD 5	1.6	82	51

Additionally, you—Georgia Pacific West, the Oregon Board of Forestry, the Oregon State Forester, and the Oregon Department of Forestry—have violated Section 301(a) of the Clean Water Act by discharging stormwater associated with industrial activity and/or pollutants from the above-described point sources on each and every day during which there was 0.12 inches or more of precipitation, as indicated in the table attached to this letter at Appendix 4.

C. Failure to Apply for NPDES Permits.

Federal and state regulations require any person who discharges or proposes to discharge pollutants to navigable waters of the United States to apply for an NPDES permit. 40 C.F.R. 122.21(a); OAR 340-045-0015(2) & (5). Additionally, federal and state regulations require dischargers of stormwater associated with industrial activity to apply for an individual permit or seek coverage under a promulgated stormwater general permit before commencing a discharge. 40 C.F.R. 122.26(c) & (e)(1)(i); OAR 340-045-0015(2) & (5). Each of you have violated these requirements by failing to apply for NPDES permits, and by failing to do so by required deadlines, for each and every location where you discharge stormwater associated with industrial activity and/or pollutants from point sources associated with logging roads to navigable waters of the United States in Oregon State Forests.

III. NEDC'S INTENT TO FILE SUIT.

The above-described violations reflect only what information currently available to NEDC indicates. All of the violations described in this notice of intent to sue are ongoing. NEDC

intends to sue for all violations on all logging roads in Oregon state forests, including those yet to be discovered or identified and those committed subsequent to the date of this notice of intent to sue.

Under Section 309(d) of the Clean Water Act, 33 U.S.C. §1319(d), each of the above-described violations subjects the violator to a penalty of up to $27,500 or $32,500 per day. In addition to civil penalties, under Sections 505(a) and (d) of the CWA, 33 U.S.C. §§1365(a) and (d), NEDC will seek injunctive relief to prevent further violations and such other relief as is permitted by law. Under Section 505(d) of the CWA, 33 U.S.C. §1365(d), NEDC will also seek recovery of the costs of litigation, including attorneys' and expert witness fees.

NEDC believes that this notice of intent to sue sufficiently states grounds for filing suit. We intend, at the close of the 60-day notice period or shortly thereafter, to file a citizen suit against you under Section 505(a) of the Clean Water Act for these and any and all similar violations.

During the 60-day notice period, we would be willing to discuss settlement terms and effective remedies for the violations in this letter. If you wish to pursue such discussions in the absence of litigation, we suggest that you initiate those discussions within 10 days of receiving this notice so that a meeting can be arranged and negotiations completed before the end of the 60-day notice period. We do not intend to delay the filing of a complaint if discussions are continuing when the notice period ends.

Very truly yours,

Washington Forest Law Center

By: _____
Paul A. Kampmeier

Cascade Resources Advocacy Group

By: _____
Chris Winter

cc: Stephen L. Johnson, Administrator, U.S. EPA
L. Michael Bogert, Regional Administrator, U.S. EPA Region 10
Stephanie Hallock, Director, Oregon Department of Environmental Quality
Registered Agent for Georgia Pacific West, Ct Corporation System, 388 State Street, Suite 420, Salem, Oregon 97301
Registered Agent for Stimson Lumber Company, TT Administrative Services, LLC, 888 SW Fifth Avenue, Suite 1600, Portland, Oregon 97204

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July 21, 2006

Via Certified Mail - Return Receipt Requested

Mr. Steven Swanson, President & Registered Agent
Swanson Group Incorporated
2695 Glendale Valley Road
Glendale, Oregon 97442

Re: Notice of Intent to File Suit under the Clean Water Act.

Dear Mr. Swanson:

This letter provides you and Swanson Group Incorporated with sixty days' notice of the Northwest Environmental Defense Center's intent to file a citizen suit against Swanson Group Incorporated under Section 505 of the Clean Water Act, 33 U.S.C. §1365, for the Clean Water Act violations described herein. The Northwest Environmental Defense Center, 10015 SW Terwilliger Blvd., Portland, Oregon 97219, (503) 768-6673, is a non-profit organization dedicated to protecting the natural environment of the Pacific Northwest. Paul Kampmeier of the Washington Forest Law Center, 615 Second Avenue, Suite 360, Seattle, Washington 98104, (206) 223-4088 x 7, and Chris Winter of the Cascade Resources Advocacy Group, 917 SW Oak, Suite 417, Portland, Oregon 97205, (503) 525-2725, represent NEDC in this matter. This letter corrects the notice letter sent to you on June 19, 2006 and alleges illegal discharges of stormwater associated with industrial activity and/or pollutants from the Sam Downs Road in Tillamook County, Oregon. Any response to this notice of intent to sue should be directed to counsel for NEDC.

Congress enacted the Clean Water Act in 1948 to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. §1251(a). In doing so, Congress declared a national goal of eliminating discharges of pollutants to navigable waters by 1985. As described more fully in this letter, Swanson Group Incorporated has violated and is violating the Clean Water Act (see Sections 301 and 402 of the CWA, 33 U.S.C. §§1311 and 1342), by collecting, channeling, and then discharging stormwater associated with industrial activity and/or pollutants from the Sam Downs Road to unnamed streams, the Little South Fork of the Kilchis River, the Kilchis River and Tillamook Bay.

a nonprofit corporation providing legal services for forest cases of statewide significance

PHOTOGRAPHY COURTESY ART WOLFE, INC. PRINTED ON 100% RECYCLED PAPER WITH VEGETABLE-BASED INKS

I. BACKGROUND.

It is widely recognized that the construction, use, and existence of logging roads detrimentally affects stream health and aquatic habitat by increasing sediment delivery and stream turbidity, adversely affecting the survival of dozens of sensitive aquatic biota, including salmon, trout, other native fishes, amphibians, and macro-invertebrates. The adverse environmental effects from logging roads change over time and vary with road location within a watershed, soils, season of construction and use, weather, and other factors. Once roads are built there is also variability based on road use and maintenance practices. What remain constant, however, are the negative impacts to water quality, salmon and other aquatic species.

A. Roads are a main source of sediment affecting aquatic systems.

Forestry-related sediment is the fifth leading source of water quality impairment to rivers and streams nationwide and sedimentation and siltation from all land uses is the leading cause of degraded wetland integrity (USEPA, 2000). In the western United States, roads are the primary source of sediment from forest management activities (Meehan and Ketcheson, 1996). Much forestry-related sediment is delivered episodically via stormwater runoff or road-related landslides. Roads, road construction and logging all cumulatively elevate peak flows, erosion, sediment delivery, turbidity, and sedimentation (Meehan, 1991; Rhodes et al., 1994; UFSF and USBLM, 1997a; Beschta et al., 2004).

Historically, logging roads were intentionally designed to discharge stormwater directly into streams—logging roads utilize ditches, channels, and culverts to move stormwater off the road and into the existing stream network. More recent design standards acknowledge that direct discharges are ecologically undesirable and seek to direct drainage onto porous forest soils for infiltration. However, most forest roads in Oregon were constructed prior to state rules that marginally improved construction standards (ODF Issue Paper, 2000). Consequently, a significant amount of the road networks in most watersheds remain hydrologically connected to streams (Wemple et al., 1996; Rhodes and Huntington, 2000).

Drainage points from logging roads include culverts and cross drains; live stream crossings; waterbars; rolling dips; grade breaks; saddles; and random points of discharge. Roads located on steep slopes or next to streams pose the greatest risk of sediment delivery and adverse impacts to stream habitats. Moreover, "the single greatest factor affecting generation of sediment from road surfaces is the amount of traffic" (Reid and Dunne, 1984). The greater the disturbance area and the closer to streams, the greater the risk of sediment delivery.

B. Logging roads in Oregon discharge stormwater and sediment to streams.

A 1996 Oregon Department for Forestry monitoring report concluded that between 29-39% of active and inactive roads on state and private lands have the potential to deliver sediment to streams (ODF, 1996). This project also found a general lack of stormwater filtering near streams. Other studies confirm the breadth of sediment and stormwater discharges from forest roads in the Pacific Northwest. In one study, 31% of the surveyed road length in five Oregon

regions was rated as certain (25%) or possible (6%) to deliver sediment to streams (Skaugset and Allen, 1998). The Skaugset and Allen study likely underestimates the amount of road length contributing sediment to streams because it assumes that all culverts function properly, when in fact contributing road length increases dramatically during large storm events when some culverts fail.

In a separate western Washington study area 75% of road drainage was discharging directly to streams (Reid and Dunne, 1984). Other studies have found that 34% of road drainage points flowed directly to stream channels (Bilby et al., 1989) and that 57.3% of road drainage in the Blue River area in the western Cascades of Oregon delivered either to channels or gullies (Wemple, 1994). Valley bottom roads generally have the highest proportion of road segments connected to streams, although many more miles of upland roads are hydrologically connected to streams.

A recent road-sediment study in the Kilchis watershed in the Tillamook State Forest found that 25-39% of the road system was delivering sediment to streams (ODF, 1997). Although some experts believe the Kilchis numbers underestimate the scope of the problem, even the Kilchis study noted a positive delivery of sediment to stream channels from 459 different discharge points along nearly 42 miles of road. An astounding 224 of the identified discharge points were "live stream culverts"—locations where stormwater ditches joined a flowing stream that then flowed through a culvert underneath a road. Indeed, although Oregon forest practices regulations have since 1978 required operators to locate stormwater management mechanisms so that stormwater is filtered before entering waters of the state, the Kilchis report found that roads in western Oregon generally, and in the Kilchis watershed specifically, "are not in the condition suggested by this rule". The report ultimately concluded "that [the] roads are designed and maintained for efficient delivery of water to channels."

Conditions on the Trask River are equally troubling. According to the 1998 Trask Watershed Assessment, completed as part of the Tillamook Bay National Estuary Project, the 2.6 miles of road per square mile in the South Fork Trask sub-watershed indicates an elevated risk of erosion due to roads (TBNEP, 1998a). In the South Fork sub-watershed alone there are reported to be approximately 12.6 miles of road contributing sediment to streams; the South Fork is one of two sub-watersheds with the highest area of potential road erosion. The Oregon Department of Environmental Quality confirms the problem and lists the mainstem of the Trask as a waterbody of concern for turbidity and sediment due to an increase in erosion caused by forest roads.

C. Sediment from logging roads diminishes water quality and negatively impacts the habitat of fish, amphibians, and other aquatic species.

Roads have many physical and biological effects that can severely and permanently harm streams and their biota (Furniss et al., 1992; Trombulak and Frissell, 2000; Gucinski et al., 2001). Increased erosion and corresponding increases in sediment delivery and sedimentation contribute to channel simplification, including losses in the depth, frequency, and quality of pools and off-channel habitat critical for fish rearing. Increased sedimentation also

contributes to increased levels of fine sediment, which greatly reduces salmonid survival from egg-to-fry life stages. Elevated sediment delivery also increases turbidity that can impair salmonid sight-feeding and cause gill damage—both factors that can contribute to indirect mortality (Rhodes et al., 1994; Lloyd et al., 1987; Newcombe and Jensen, 1996; Wood, 1997).

As noted in the Kilchis Watershed Analysis:

> The negative effects of increased sediment generation include: fine sediment deposition in spawning gravels that can smother salmonid eggs, reduce[d] intergravel oxygen, increased turbidity in the water column that can interfere with sight-feeding by salmonids, direct burial of macroinvertebrate insects and their habitat, and bed aggradation throughout the stream network including accumulation of sediment in low gradient channels causing bank erosion and impairing navigation (TBNEP, 1998b).

Increases in sediment delivery also contribute to increases in width/depth ratios in sensitive streams (Richards, 1982; Rhodes et al., 1994), which inevitably increases summer water temperatures even in the absence of the loss of shade (Beschta et al., 1987; McCullough, 1999).

The most well-known native aquatic species affected by turbidity and sedimentation are salmon and trout; Oregon state lands support coho, chinook, and chum salmon, steelhead, and cutthroat and rainbow trout. There are also twenty other fishes known or likely to exist in the Tillamook and Clatsop State Forests that are potentially affected by sediment delivery.[1] Additionally, nineteen potentially-affected amphibians are known to exist or likely exist on northwest Oregon state lands.[2]

Indeed, both the Trask and Kilchis Rivers support fish species that are in decline, face significant ecological challenges, or are listed as "species of concern". On the Trask River, Pacific and River Lamprey, coastal cutthroat trout, and chum salmon are all considered "species of concern". Coho salmon and winter steelhead trout have also been listed or proposed for listing under the federal Endangered Species Act. The Kilchis Watershed Analysis notes that only one of the five Tillamook Basin salmonid populations is currently healthy and that the forested upland has been greatly altered by forestry and timber harvest.

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[1] These are: Pacific lamprey; Brook lamprey; River lamprey; Coast Range sculpin; Mottled sculpin; Torrent sculpin; Reticulated sculpin; Riffle sculpin; Prickly sculpin; Paiute sculpin; Tui chub; Oregon chub; Northern squawfish; Speckled dace; Longnose dace; Leopard dace; Redside-shiner; Peamouth; Largescale sucker; and Three-spine stickleback (ODF, 2001).

[2] These are: Northwestern salamander; Long-toed salamander; Cope's giant salamander; Pacific giant salamander; Cascade torrent salamander; Columbia torrent salamander; Southern torrent salamander; Clouded salamander; Oregon slender salamander; Ensatina; Dunn's salamander; Western red-backed salamander; Roughskin newt; Tailed frog; Pacific treefrog; Red-legged frog; Foothill yellow-legged frog; Cascades frog; and Oregon spotted frog (ODF, 2001).

Under the state's water quality standards, these species and their habitat are beneficial uses that must be fully protected. The State of Oregon's biological criteria require that water quality must be sufficient to prevent detrimental changes in all resident biological communities, OAR 340-41-0011, including macro-invertebrate communities that often constitute the food source for aquatic species. Yet despite these rules and the acknowledged serious impacts of logging roads, logging road pollution continues to negatively impact water quality and the habitat of fish, amphibians, and other aquatic species on state forest lands.

II. CLEAN WATER ACT VIOLATIONS.

A. Legal background and requirements.

Section 301(a) of the Clean Water Act, 33 U.S.C. §1311(a), prohibits the point source discharge of pollutants to navigable waters of the United States unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit issued pursuant to Section 402 of the Clean Water Act, 33 U.S.C. §1342. Additionally, as required by Section 402(p) of the Clean Water Act, 33 U.S.C. §1342(p), U.S. EPA regulations require NPDES permits for discharges of stormwater associated with industrial activity such as logging. 40 C.F.R. 122.26. Point source discharges of industrial stormwater and/or pollutants from forest roads are therefore illegal unless they are in compliance with an NPDES permit.

The EPA regulation defining the term "silvicultural point source" does not exempt point source discharges of industrial stormwater and/or pollutants from the requirement to have an NPDES permit. 40 C.F.R. 122.27. The Ninth Circuit Court of Appeals recently held that 40 C.F.R. 122.27 only excludes nonpoint source silvicultural activities from NPDES permit requirements but does not exempt point source discharges like the aerial application of pesticides. *League of Wilderness Defenders v. Forsgren*, 309 F.3d 1181, 1186 (9th Cir. 2002). More recently, a federal district court in California held that conduits and channels associated with a timber company's stormwater runoff collection system need NPDES permits if they meet the statutory definition of "point source". *Environmental Protection Information Center v. Pacific Lumber Company*, 301 F.Supp.2d 1102, 1113 (N.D. Cal. 2004).

B. Unpermitted discharges.

Swanson Group Incorporated has violated Section 301(a) of the Clean Water Act and EPA's industrial stormwater regulations by discharging stormwater associated with industrial activity and/or pollutants from point sources along the Sam Downs Road to navigable waters of the United States without an NPDES permit. These unpermitted discharges violate the Clean Water Act and are ongoing.

Specifically, along the Sam Downs Road,[3] Swanson Group Incorporated has built, maintained, and/or utilized a network of ditches, channels, culverts, and other mechanisms to collect, channel, and then discharge stormwater associated with industrial activity and/or pollutants to unnamed streams and the Little South Fork of the Kilchis River, which are

[3] See Appendix 1 for a map showing the approximate location of the Sam Downs Road section at issue.

tributary to the Kilchis River and Tillamook Bay. The locations of the point sources from which Swanson Group Incorporated is discharging include:

- Approximately 2.2 miles past the yellow ½ mile marker that is on the section of the Kilchis River Road that runs along the south and east side of the Kilchis River (the yellow ½ mile marker is past (east of) the Kilchis River/Mapes Creek boat ramp), roadside stormwater collection ditches discharge to a stream that then runs through a black plastic culvert under the road and down the riverbank to the Little South Fork of the Kilchis River (SD 1);

- Approximately 2.35 miles past the yellow ½ mile marker on the Kilchis River Road, roadside stormwater collection ditches discharge to a stream that then runs through a metal culvert under the road and down the riverbank to the Little South Fork of the Kilchis River (SD 2);

- Approximately 2.9 miles past the yellow ½ mile marker on the Kilchis River Road, just upstream of the smolt trap, roadside stormwater collection ditches discharge through a culvert under the road and then through a ditch to the Little South Fork of the Kilchis River (SD 3);

- Approximately 3.4 miles past the yellow ½ mile marker on the Kilchis River Road, roadside stormwater collection ditches discharge through culverts under the road and then dump stormwater and/or pollutants down the steep hillside and riverbank to the Little South Fork of the Kilchis River (SD 4); and

- Approximately 3.6 miles past the yellow ½ mile marker on the Kilchis River Road, there are two culverts with diffusers—the first black plastic and the second metal—dumping stormwater and/or pollutants down the hillside and riverbank to the Kilchis River (SD 5).

Swanson Group Incorporated has violated Section 301(a) of the Clean Water Act by discharging stormwater associated with industrial activity and/or pollutants from these point sources on the following days:

Table 1: Total Suspended Solids (TSS)

Period of Violation	Discharge Location	Receiving Water TSS (mg/L)	Discharge TSS (mg/L)	Number of Times Over Background
4/15/06	SD 1	Non-detect	260	260
4/15/06	SD 2	Non-detect	210	210
4/15/06	SD 3	2.0	68	34
4/15/06	SD 5	Non-detect	45	45
3/17/06	SD 1	Non-detect	44	44
3/17/06	SD 2	Non-detect	100	100
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Table 2: Turbidity

Period of Violation	Discharge Location	Receiving Water Turbidity (NTU)	Discharge Turbidity (NTU)	Number of Times Over Background
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4/15/2006	SD 5	1.6	82	51

Additionally, Swanson Group Incorporated has violated Section 301(a) of the Clean Water Act by discharging stormwater associated with industrial activity and/or pollutants from the above-described point sources on each and every day during which there was 0.12 inches or more of precipitation, as indicated in the table attached to this letter at Appendix 2.

C. Failure to Apply for NPDES Permits.

Federal and state regulations require any person who discharges or proposes to discharge pollutants to navigable waters of the United States to apply for an NPDES permit. 40 C.F.R. 122.21(a); OAR 340-045-0015(2) & (5). Additionally, federal and state regulations require dischargers of stormwater associated with industrial activity to apply for an individual permit or seek coverage under a promulgated stormwater general permit before commencing a discharge. 40 C.F.R. 122.26(c) & (e)(1)(i); OAR 340-045-0015(2) & (5). Swanson Group Incorporated has violated these requirements by failing to apply for NPDES permits, and by failing to do so by required deadlines, for each and every location where Swanson Group Incorporated discharges stormwater associated with industrial activity and/or pollutants from point sources along logging roads to navigable waters of the United States, including discharges from point sources along the Sam Downs Road.

III. NEDC'S INTENT TO FILE SUIT.

The above-described violations reflect only what information currently available to NEDC indicates. All of the violations described in this notice of intent to sue are ongoing. NEDC intends to sue for all violations, including those yet to be discovered or identified and those committed subsequent to the date of this notice of intent to sue.

Under Section 309(d) of the Clean Water Act, 33 U.S.C. §1319(d), each of the above-described violations subjects the violator to a penalty of up to $27,500 or $32,500 per day. In addition to civil penalties, under Sections 505(a) and (d) of the CWA, 33 U.S.C. §§1365(a) and (d), NEDC will seek injunctive relief to prevent further violations and such other relief as is permitted by law. Under Section 505(d) of the CWA, 33 U.S.C. §1365(d), NEDC will also seek recovery of the costs of litigation, including attorneys' and expert witness fees.

NEDC believes that this notice of intent to sue sufficiently states grounds for filing suit. We intend, at the close of the 60-day notice period or shortly thereafter, to file a citizen suit

against Swanson Group Incorporated under Section 505(a) of the Clean Water Act for these and any and all similar violations.

During the 60-day notice period, NEDC would be willing to discuss settlement terms and effective remedies for the violations in this letter. If you wish to pursue such discussions in the absence of litigation, we suggest that you initiate those discussions within 10 days of receiving this notice so that a meeting can be arranged and negotiations completed before the end of the 60-day notice period. NEDC does not intend to delay the filing of a complaint if discussions are continuing when the notice period ends.

Very truly yours,

Washington Forest Law Center

By: _____
Paul A. Kampmeier

Cascade Resources Advocacy Group

By: _____
Chris Winter

cc: Stephen L. Johnson, Administrator, U.S. EPA
Ron Kreizenbeck, Action Regional Administrator, U.S. EPA Region 10
Stephanie Hallock, Director, Oregon Department of Environmental Quality
Jas Adams, Oregon Department of Justice
Lou Ferreira and Greg Corbin, Stoel Rives

United States
Environmental Protection
Agency

Office Of Water
(4203)

EPA 833-K-94-002
March 1995

EPA

Storm Water Discharges Potentially Addressed By Phase II Of The National Pollutant Discharge Elimination System Storm Water Program

Report To Congress

EXHIBIT 1

sources and facilities, classes of facilities with the potential to contribute pollutants to storm water discharges were identified. The analysis of the nature and extent of individual Phase II discharges addresses both pollutant concentrations and the geographic distribution of facilities. The geographical analysis was developed to determine the distribution and location of individual Phase II facilities in relation to Urbanized Areas and the Phase II municipalities identified in the first part of this study. Although there was not enough data available on a national basis to estimate pollutant loadings from individual Phase II sources, the approach taken could later be related to an assessment of water quality conditions at the local, regional, or State level.

2.3.1 Identifying Individual Phase II Storm Water Discharges

The storm water discharge regulations (Phase I) require permit applications from facilities with "storm water discharges associated with industrial activity," as defined in 40 *CFR* 122.26(b)(14) (55 *FR* 47990). This definition describes the 11 specific categories of industrial activities which are regulated. For the categories of industries identified, the term includes storm water discharges from:

> . . . industrial plant yards; immediate access roads and rail lines used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters . . .; sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water [40 *CFR* 122.26(b)(14)].

The definitions of the 11 categories include both narrative descriptions of activities and specific designations of industrial operations based on Standard Industrial Classification (SIC) code.[7] For example, category (i) mentions facilities subject to effluent limitations guidelines

[7] The SIC code is the statistical classification standard underlying all Federal economic statistics classified by industry (OMB, 1987).

EXHIBIT 1
Page 2 of 7

developed by EPA, while category (xi) designates many specific SIC codes. Because of the comprehensiveness of the SIC system, even narrative descriptions can be correlated with SIC designations. For example, category (vii) covers steam electric power generating facilities, which are included primarily in SIC 4911, and category (ix) covers domestic treatment works, which are included primarily in SIC 4952. The practical effect of these narrative definitions and specific SIC code designations is that most of the industrial facilities subject to permit application requirements are represented by major SIC groupings 10 through 45.[8]

As a basis for identifying Phase II facilities and obtaining information about their distribution and abundance, this study focused on SIC codes. Major sectors of the economy are defined on the basis of the two-digit SIC code group. The two-digit code is a relatively general categorization of the Nation's economic activity; all industrial, commercial, and retail activities are organized into less than 100 two-digit SIC codes, which are listed in Table 2-5. The more specific four-digit SIC code provides a more detailed breakdown of these enterprises and is much more descriptive of the activities conducted at the establishment. The SIC code identifies facilities based on the "primary activity" in which a facility is engaged. Chapter 4 discusses selected advantages and disadvantages of using the SIC code system for identification of storm water sources. Focusing on SIC codes for the purposes of this study does not imply that EPA must regulate on a SIC code basis. Also, although some potential Phase II categories or concerns may be defined or discussed in terms of narrative descriptions, these can be evaluated in terms of SIC code designations.

Although all unregulated facilities which have point source discharges of storm water are potential Phase II sources, in practical terms, only a subset of four-digit SIC codes have real

[8] The NPDES regulations specifically exempt some categories of activity from the definition of point source, including storm water runoff from agricultural sources and silviculture activities (mostly in SIC codes 01 through 09) (40 *CFR* Part 122.3(e)), irrigation return flows (40 *CFR* Part 122.3(f)), and uncontaminated runoff from mining sites and oil and gas facilities (40 *CFR* 122.26(a)(2)). In addition, construction activities are regulated based on the site where activity is occurring, not based on the SIC code for contractors and builders that may participate in the construction (SIC 15 - 17).

EXHIBIT 1
Page 3 of 7

Table 2-5. List of All Two-Digit SIC Code Groups and Industry Description

SIC CODE	DESCRIPTION	SIC CODE	DESCRIPTION
01	Ag. Product.-Crops	50	Wholesale-Durables
02	Ag. Product.-Livestock	51	Wholesale-Nondurables
07	Ag. Services	52	Bldg. & Gard. Mats.
08	Forestry	53	General Stores
09	Fishing, Hunting	54	Food Stores
10	Metal Mining	55	Auto Dealers & Service
12	Coal & Lignite Mining	56	Apparel Stores
13	Oil & Gas Extraction	57	Furniture Stores
14	Nonmetallic Minerals	58	Eat & Drink Places
15	Building Contractors	59	Misc. Retail
16	Heavy Const. Contractors	60	Banking
17	Spec. Trade Contractors	61	Credit Agencies
20	Man. Food, etc.	62	Security Brokers
21	Man. Tobacco	63	Insurance Carriers
22	Man. Textile	64	Insurance Agents
23	Man. Apparel	65	Real Estate
24	Lumber & Wood	67	Investment Offices
25	Furniture & Fixtures	70	Hotels & Lodging
26	Paper & Allied Prod.	72	Personal Services
27	Printing & Publish.	73	Business Services
28	Chemicals & Allied	75	Auto Repair Services
29	Petroleum & Coal	76	Misc. Repair
30	Rubber & Plastic Products	78	Motion Pictures
31	Leather/Products	79	Amusement Services
32	Stone, Clay & Glass	80	Health Services
33	Primary Metal Ind.	81	Legal Services
34	Fab. Metal Products	82	Educational Services
35	Machinery-electric	83	Social Services
36	Electronic Equip.	84	Museums
37	Transportation Equip.	86	Membership Orgs.
38	Instrument & Related	87	Research & Development
39	Misc. Manufacturing	88	Households w/Employees
40	Railroad Transport	89	Services, NEC
41	Local Pass. Transit	91	Executive, Gen'l Govt.
42	Trucking	92	Justice, Public Order
43	U.S. Postal Service	93	Public Finance, Taxes
44	Water Transport	94	Human Resource Admin
45	Air Transport	95	Env. Qual. & Housing Admin.
46	Pipe Lines-Nat. Gas	96	Economic Program Admin.
47	Transport Services	97	National Security
48	Communication	99	Non-Classifiable
49	Electric, Gas & Sanitation		

EXHIBIT 1
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potential to use, process, or store sources of pollutants, or engage in activities that could lead to contamination of storm water. In addition, there are many general sources of storm water contamination such as parking lots, trash dumpsters, and failing septic systems which could be associated with almost any commercial or residential activity. Some general information on these sources is presented in Chapter 4; however, the focus of this report is in identifying specific classes of facilities with greater than average potential for contribution of pollutants to storm water discharges based on their activities.

EPA identified two major groups of facilities for potential inclusion in Phase II. The first group of potential Phase II facilities identified (Group A) consists of facilities in the same SIC code groups as Phase I facilities (SICs 10-45) that are conducting activities that are essentially the same as Phase I industrial activities but that were not included in Phase I due to the specific language of the statute or EPA's regulatory specificity in defining the universe of Phase I industrial activities. The second major group (Group B) consists of facilities in all other SIC code groups where discharges of pollutants are suspected based on case studies, expert opinions, literature reviews, and other sources of information such as experience with Phase I of the storm water program.[9]

2.3.1.1 Group A Facilities

Group A is comprised of facilities which are generally identical to regulated Phase I industrial activities but that have been excluded from Phase I due to the specific language of the statute or EPA's regulatory specificity. While some of the facilities that make up Group A are obvious, (i.e., those with a specific statutory exemption from Phase I), others are more difficult to identify. Because these facilities may be described by SIC codes identical to Phase I regulated facilities, the FACTS data base was of little use in identifying these

[9] Although some sources similar to Phase I industrial activities were not identified in the 1990 application regulations (55 FR 47990) directly, EPA or an authorized NPDES State has the authority under Section 402(p)(2)(E) to designate individual facilities as needing an NPDES permit. Although some designations of this type have been made, this report bases the distinction of individual Phase I and Phase II facilities based on the regulatory definition and not on any individual designations which may have been made.

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Page 5 of 7

Sector 1: Timber Products Facilities

The definition of storm water discharges associated with industrial activity includes point source discharges of storm water from eleven major categories of facilities, including: "... category (ii) facilities classified as Standard Industrial Classification (SIC) code 24 (except 2434)." Storm water discharges covered include those from establishments that cut timber and pulpwood, merchant sawmills, lath mills, shingle mills, cooperage stock mills, planing mills, and plywood and veneer mills that produce lumber and wood basic materials; and establishments that manufacture finished articles made entirely of wood or related materials. These facilities use wood as their primary raw material. Industrial activities include the following:

Log Storage and Handling activities include loading and unloading of logs onto trucks or railroad cars for transport to other facilities, log sorting, and storage of logs. In addition, some cutting may be performed, such as chopping off tree branches and sectioning of tree trunks for easier handling during transport. Chipping may be performed at facilities serving pulp industries. Residues generated at these sites may include bark, coarse sawdust, and wood chunks.

Untreated Wood Lumber and Residue Generation Activities occur at the following: saw and planing mills (SIC group 242); millwork, veneer, plywood and structural wood member manufacturing facilities (SIC group 243); wood container manufacturing facilities (SIC group 244); wood building and mobile home manufacturing facilities (SIC group 245); and miscellaneous wood product manufacturers (SIC group 249). These facilities may engage in one or more activities such as log washing, bark removal, milling, sawing, resawing edging, trimming, planing, machining, air drying, and kiln drying. Some facilities generate residue as a product, while other facilities may generate residues as a waste product. A summary of the residues generated include: bark, wood chips, planer shavings, and sawdust.

Wood Surface Protection Activities are accomplished by one of the following three methods: spraying, dipping, and green chain operations. Industrial activities at saw mills with the potential to contaminate storm water include spills from surface protection areas, storage and mixing tank areas, treated wood drippage, transport or storage areas, maintenance and shop areas, and areas used for treatment/disposal of wastes. Fugitive emissions from negative pressure spraying activities and hand spraying surface protection formulations may also result in the contamination of storm water.

Wood Preservation Activities are accomplished by two steps. First, the moisture content of wood is reduced to increase its permeability (this is referred to as conditioning). After conditioning, wood is impregnated with a preservative for fire retardency, insecticidal resistance, and/or fungicidal resistance. Then, the wood stock is often subject to cleaning in order to remove excess preservative prior to stacking treated lumber products outside.

Wood Assembly/Fabrication Activities such as the fabrication of fiberboard, insulation board, and hardboard may involve the use of wax emulsions, paraffin, aluminum sulfate,

melamine formaldehyde, and miscellaneous thermosetting resins. These chemicals may be introduced as part of the board formation process or as a coating to maintain the board's integrity. In the formation of fiberboard/insulation board/hardboards, the digestion of pulp and fiber by mechanical, thermal, and sometimes chemical means takes place. Another operation which involves resinous agents is the formation of veneer. In this process, veneer is placed in hot ponds or vats to soften the wood. Veneer strips are removed and often bound by glue or a resinous agent. Glues are also used in the assembly of wood components. Other types of activities include the finishing of wood products. Stains, paints, lacquers, varnish, water repellents and sealants, etc. may be applied to some of the wood products.

Significant materials at timber products facilities which can contribute pollutants to storm water include: uncut logs, wood bark, wood chips wood shavings, sawdust, green lumber, rough and finished lumber, other waste wood material, non-hazardous wood ash, above and below ground fuel storage tanks, finishing chemicals, solvents and cleaners, petroleum, herbicides, pesticides, fertilizers, sawmill equipment, material handling equipment, boiler water treatment chemicals, scrap metals, scrap equipment and plastics, boiler blowdown water, and leachate from decaying organic matter.

Pollutants from timber products facilities generally include biological oxygen demand (BOD^5), total suspended solids (TSS), chemical oxygen demand (COD), leachate, wood wastes, chemicals, heavy metals, and pH.

Table E-1
Summary Statistics From (Part 2) Sampling Results by Industrial Sector
Industrial Sector I

	Grab Samples (mg/l)				Composite Samples (mg/l)				NURP Results (mg/l)		
Pollutant	No.	Mean	Median	95%	No.	Mean	Median	95%	Mean	Median	90%
BOD5	198	39.63	13.00	193.00	200	45.37	17.00	135.50	12.00	9.00	15.00
COD	19	297.64	131.00	1500.00	198	242.50	122.50	1080.00	82.00	65.00	140.00
Copper	32	0.05	0.03	0.16	29	0.04	0.03	0.12	0.04	0.04	0.09
Lead									0.18	0.14	0.35
NO_3+NO_3-N	189	0.95	0.32	2.20	188	0.75	0.34	1.79	0.86	0.68	1.75
Oil & Grease	107	15.21	2.20	55.00					NR	NR	NR
P, Total	198	23.91	0.29	2.66	199	6.29	0.30	1.72	0.42	0.33	0.70
pH	211	7.17	7.30	8.56					NR	NR	NR
TKN	188	2.57	1.62	9.26	188	2.32	1.50	7.50	1.90	1.50	3.30
TSS	198	1108.42	242.00	4800.00	198	575.27	230.00	2288.00	180.00	100.00	300.00
Zinc	16	0.47	0.37	1.70	15	0.36	0.30	1.20	0.20	0.16	0.50

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET

STANDARD INDUSTRIAL CLASSIFICATION MANUAL

1987

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Introduction

The Standard Industrial Classification of Establishments

Purpose and Scope of the Classification

The Standard Industrial Classification (SIC) was developed for use in the classification of establishments by type of activity in which they are engaged; for purposes of facilitating the collection, tabulation, presentation, and analysis of data relating to establishments; and for promoting uniformity and comparability in the presentation of statistical data collected by various agencies of the United States Government, State agencies, trade associations, and private research organizations. The Standard Industrial Classification for *establishments* differs from a classification for *enterprises* (companies) or products. An enterprise consists of all establishments having more than 50 percent common direct or indirect ownership. Other classifications have been developed for use in the classification of commodities or products and also for occupations.

The Standard Industrial Classification is intended to cover the entire field of economic activities: agriculture, forestry, fishing, hunting, and trapping; mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; personal, business, professional, repair, recreation, and other services; and public administration.

This edition of the Manual supersedes the 1972/77 edition. Appendix A presents conversion tables between the 1972/77 edition and the 1987 edition.

Principles of the Classification

In reviewing the Classification, the Technical Committee on Industrial Classification was guided by the following general principles:

(1) The Classification should conform to the existing structure of American industry.

(2) Each establishment is to be classified according to its primary activity.

(3) To be recognized as an industry, the group of establishments constituting the proposed classification must be statistically significant in the number of persons employed, the volume of business conducted, and other measures of economic activity.

Appendix B describes in more detail the principles and procedures used for this revision.

Structure of the Classification

The structure of the classification makes it possible to tabulate, analyze, and publish establishment data on a division, a two-digit major group, a three-digit industry group, or a four-digit industry code basis, according to the level of industrial detail considered most appropriate. An agency may use additional subdivisions within specific four-digit industries in adopting this classification for its own use, while still retaining comparability with the classifications used by other agencies.

It should be noted that the digit "9" appearing in the third- or fourth-digit position of the classification code usually designates miscellaneous three-digit industry groups or four-digit industries covering establishments not elsewhere classified. These residual classifications do not usually constitute homogeneous primary activity groups; for purposes of this classification system they are grouped together and treated as a separate industry to retain the homogeneity of the other industries in the group.

Definition of an Establishment

For purposes of this classification, an establishment is an economic unit, generally at a single physical location, where business is conducted or where services or industrial operations are performed. (For example: a factory, mill, store, hotel, movie theater, mine, farm, ranch, bank, railroad depot, airline terminal, sales office, warehouse, or central administrative office.)

Where distinct and separate economic activities are performed at a single physical location (such as construction activities operated out of the same physical location as a lumber yard), each activity should be treated as a separate establishment where: (1) no one industry description in the classification includes such combined activities; (2) the employment in each such economic activity is significant; and (3) separate reports can be prepared on the number of employees, their wages and salaries, sales or receipts, and other types of establishment data.

For activities such as construction, transportation, communications, electric, gas, and sanitary services, and similar physically dispersed operations, establishments are represented by those relatively permanent main or branch offices, terminals, stations, etc., that are either (1) directly responsible for supervising such activities, or (2) the base from which personnel operate to carry out these activities. Hence, the individual sites, projects, fields, networks, lines, or systems of such dispersed activities are not ordinarily considered to be establishments.

An establishment is not necessarily identical with the enterprise (company) which may consist of one or more establishments. Also, it is to be distinguished from subunits of the establishment such as departments. Supplemental interpretations of the definition of an establishment are included in the division, major group, industry group, and industry descriptions of the Standard Industrial Classification

where appropriate. Auxiliary units, as described below, are recognized as special types of establishments.

Auxiliary Establishments

Activities

Auxiliaries are establishments primarily engaged in performing management or support services for other establishments of the same enterprise. An enterprise consists of all establishments having more than 50 percent common direct or indirect ownership. Auxiliary establishments are distinguished from operating establishments that primarily produce goods and from those that primarily provide services for personal or household use or for other enterprises. Some examples of activities commonly performed by auxiliaries are management and other general administrative functions, such as accounting, data processing, and legal services; research, development, and testing; and warehousing.

Establishment Unit

A unit that performs auxiliary functions and is located physically separate from the establishment or establishments served is treated as a separate establishment. A unit that performs auxiliary activities at the same physical location as an establishment that performs operating activities is considered a separate establishment if all of the following conditions are met:

(1) Separate reports can be prepared on the number of employees, their wages and salaries, sales or receipts, and other types of establishment data; and

(2) the unit serves other establishments of the same enterprise; and

(3) employment is significant for both the auxiliary and operating activities.

Exceptions and Borderlines

Some establishments that meet the general definition of auxiliaries are nevertheless treated as operating establishments. They are listed below:

(1) Establishments primarily engaged in producing goods or providing services for other establishments of the same enterprise when such goods or services are covered by industries in Agriculture (Major Groups 01-07 of Division A); Mining (Division B); Construction (Division C); and Manufacturing (Division D) are classified as operating establishments in such Divisions on the basis of their primary activity.

(2) Establishments, including sales branches, sales offices, and sales representatives, primarily engaged in selling tangible products for other than personal or household consumption are classified as operating establishments in Wholesale Trade, with the exception of motion pictures and prerecorded video tapes and disks of the type produced by establishments covered in Major Group 78. Establishments primarily engaged in the wholesale distribution of motion pictures and prerecorded video tapes and disks of the type produced by establishments covered in

Major Group 08. —FORESTRY

The Major Group as a Whole

This major group includes establishments primarily engaged in the operation of timber tracts, tree farms, forest nurseries, and related activities such as reforestation services and the gathering of gums, barks, balsam needles, maple sap, Spanish moss, and other forest products.

Industry Group No. | Industry No.

081 TIMBER TRACTS

0811 Timber Tracts

Establishments primarily engaged in the operation of timber tracts or tree farms for the purpose of selling standing timber. Establishments holding timber tracts as real property (not for sale of timber) are classified in Real Estate, Industry 6519; and logging establishments are classified in Manufacturing, Industry 2411.

Christmas tree growing
Timber tracts
Tree farms

083 FOREST NURSERIES AND GATHERING OF FOREST PRODUCTS

0831 Forest Nurseries and Gathering of Forest Products

Establishments primarily engaged in growing trees for purposes of reforestation or in gathering forest products. The concentration or distillation of these products, when carried on in the forest, is included in this industry.

Balsam needles, gathering of
Distillation of gums if carried on at the gum farm
Distillation of turpentine and resin if carried on at the gum farm
Forest nurseries
Gathering of forest products (e.g., gums, barks, seeds)
Ginseng, gathering of
Huckleberry greens, gathering of
Lac production
Maple sap, gathering of
Moss, gathering of
Pine gum, extraction of
Rubber plantations
Spanish moss, gathering of
Sphagnum moss, gathering of
Teaberries, gathering of
Tree seed gathering, extracting, and selling

085 FORESTRY SERVICES

0851 Forestry Services

Establishments primarily engaged in performing, on a contract or fee basis, services related to timber production, wood technology, forestry economics and marketing, and other forestry services, not elsewhere classified, such as cruising timber, firefighting, and reforestation.

Cruising timber
Estimating timber
Fire prevention, forest
Firefighting, forest
Forest management plans, preparation of
Forestry services
Pest control, forest
Reforestation
Timber valuation

Major Group 09.—FISHING, HUNTING, AND TRAPPING

The Major Group as a Whole

This major group includes establishments primarily engaged in commercial fishing (including crabbing, lobstering, clamming, oystering, and the gathering of sponges and seaweed), and the operation of fish hatcheries and fish and game preserves, in commercial hunting and trapping, and in game propagation.

Industry Group No. | Industry No.

091 **COMMERCIAL FISHING**

0912 Finfish

Establishments primarily engaged in the catching or taking of finfish.

Bluefish, catching of
Cod, catching of
Eels, catching of
Finfish, catching of
Fisheries, finfish
Haddock, catching of
Mackerel, catching of
Menhaden, catching of
Pilchard, catching of
Pollack, catching of
Rays, catching of
Salmon, catching of
Sea herring, catching of
Sharks, catching of
Tuna, catching of
Whiting, catching of

0913 Shellfish

Establishments primarily engaged in the catching or taking of shellfish.

Clams, digging of
Crabs, catching of
Crayfish, catching of
Fisheries, shellfish
Lobsters, catching of
Mussels, taking of
Oyster beds
Oysters, dredging or tonging of
Shellfish, catching of
Shrimp, catching of
Squid, catching of

0919 Miscellaneous Marine Products

Establishments primarily engaged in miscellaneous fishing activities, such as catching or taking of sea urchins, terrapins, turtles, and frogs. The gathering of seaweed and sponges is also included in this industry.

Cultured pearl production
Frogs, catching of
Sea urchins, catching of
Seaweed, gathering of
Sponges, gathering of
Terrapins, catching of
Turtles, catching of

092 **FISH HATCHERIES AND PRESERVES**

0921 Fish Hatcheries and Preserves

Establishments primarily engaged in operating fish hatcheries or preserves. Establishments primarily engaged in the production of fish or frogs under controlled feeding, sanitation, and harvesting procedures are classified in Industry Group 027.

Fish hatcheries
Fishing preserves

097 **HUNTING AND TRAPPING, AND GAME PROPAGATION**

0971 Hunting and Trapping, and Game Propagation

Establishments primarily engaged in commercial hunting and trapping, or in the operation of game preserves.

Industry Group No.	Industry No.	
097		**HUNTING AND TRAPPING, AND GAME PROPAGATION—Con.**
	0971	**Hunting and Trapping, and Game Propagation—Con.**

Animal trapping, commercial
Game management
Game preserves
Game propagation
Game retreats, operation of
Hunting carried on as a business enterprise
Hunting preserves, operation of
Trapping carried on as a business enterprise
Wildlife management

DIVISION D

Manufacturing

The Division as a Whole

The manufacturing division includes establishments engaged in the mechanical or chemical transformation of materials or substances into new products. These establishments are usually described as plants, factories, or mills and characteristically use power driven machines and materials handling equipment. Establishments engaged in assembling component parts of manufactured products are also considered manufacturing if the new product is neither a structure nor other fixed improvement. Also included is the blending of materials, such as lubricating oils, plastics resins, or liquors.

The materials processed by manufacturing establishments include products of agriculture, forestry, fishing, mining, and quarrying as well as products of other manufacturing establishments. The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become a raw material for an establishment engaged in further manufacturing. For example, the product of the copper smelter is the raw material used in electrolytic refineries; refined copper is the raw material used by copper wire mills; and copper wire is the raw material used by certain electrical equipment manufacturers.

The materials used by manufacturing establishments may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another which is under the same ownership. Manufacturing production is usually carried on for the wholesale market, for interplant transfer, or to order for industrial users, rather than for direct sale to the domestic consumer.

There are numerous borderline cases between manufacturing and other divisions of the classification system. Specific instances will be found in the descriptions of the individual industries. The following activities, although not always considered as manufacturing, are so classified:

Milk bottling and pasteurizing;

Fresh fish packaging (oyster shucking, fish filleting);

Apparel jobbing (assigning of materials to contract factories or shops for fabrication or other contract operations) as well as contracting on materials owned by others;

Publishing;

Ready-mixed concrete production;

Leather converting;

Logging;

Wood preserving;

Various service industries to the manufacturing trade, such as typesetting, engraving, plate printing,

and preparing electrotyping and stereotype plates, but not blueprinting or photocopying services;
Electroplating, plating, metal heat treating, and polishing for the trade;
Lapidary work for the trade;
Fabricating of signs and advertising displays.

There are also some manufacturing-type activities performed by establishments which are primarily engaged in activities covered by other divisions, and are, thus, not classified as manufacturing. A few of the more important examples are:

Agriculture, Forestry, and Fishing

Processing on farms is not considered manufacturing if the raw materials are grown on the farm and if the manufacturing activities are on a small scale without the extensive use of paid labor. Other exclusions are threshing and cotton ginning.

Mining

The dressing and beneficiating of ores; the breaking, washing, and grading of coal; the crushing and breaking of stone; and the crushing, grinding, or otherwise preparing of sand, gravel, and nonmetallic chemical and fertilizer minerals other than barite are classified in Mining.

Construction

Fabricating operations performed at the site of construction by contractors are not considered manufacturing, but the prefabrication of sheet metal, concrete, and terrazzo products and similar construction materials is included in the Manufacturing Division.

Wholesale and Retail Trade

Establishments engaged in the following types of operations are included in Wholesale or Retail Trade: cutting and selling purchased carcasses; preparing feed at grain elevators and farm supply stores; stemming leaf tobacco at wholesale establishments; and production of wiping rags. The breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals, is also classified as Wholesale or Retail Trade. Also included in Retail Trade are establishments primarily engaged in selling, to the general public, products produced on the same premises from which they are sold, such as bakeries, candy stores, ice cream parlors, and custom tailors.

Services

Tire retreading and rebuilding, sign painting and lettering shops, computer software production, and the production of motion picture films (including video tapes) are classified in Services. Most repair activities are classified as Services. However, some repair activity such as shipbuilding and boatbuilding and repair, the rebuilding of machinery and equipment on a factory basis, and machine shop repair are classified as manufacturing.

ABBREVIATIONS USED FOR INDEX ITEMS

mach.—machinery
mfpm—made from purchased materials or materials transferred from another establishment.
mitse—made in the same establishment as the basic materials.

Major Group 24.—LUMBER AND WOOD PRODUCTS, EXCEPT FURNITURE

The Major Group as a Whole

This major group includes establishments engaged in cutting timber and pulpwood; merchant sawmills, lath mills, shingle mills, cooperage stock mills, planing mills, and plywood mills and veneer mills engaged in producing lumber and wood basic materials; and establishments engaged in manufacturing finished articles made entirely or mainly of wood or related materials. Certain types of establishments producing wood products are classified elsewhere. For example, furniture and office and store fixtures are classified in Major Group 25; musical instruments, toys and playground equipment, and caskets are classified in Major Group 39. Woodworking in connection with construction, in the nature of reconditioning and repair, or performed to individual order, is classified in nonmanufacturing industries. Establishments engaged in integrated operations of logging combined with sawmills, pulp mills, or other converting activity, with the logging not separately reported, are classified according to the primary product shipped.

Industry Group No | Industry No.

241 LOGGING

2411 Logging

Establishments primarily engaged in cutting timber and in producing rough, round, hewn, or riven primary forest or wood raw materials, or in producing wood chips in the field. Independent contractors engaged in estimating or trucking timber, but who perform no cutting operations, are classified in nonmanufacturing industries. Establishments primarily engaged in the collection of bark, sap, gum, and other forest products are classified in Forestry, Major Group 08.

Bolts, wood: e.g., handle, heading, shingle, stave
Burls, wood
Driving timber
Fuel wood harvesting
Last blocks, wood: hewn or riven
Logging contractors
Logs
Mine timbers, hewn
Peeler logs
Pickets and palling: round or split
Piling, wood: untreated
Pole cutting contractors
Poles, wood: untreated
Posts, wood: hewn, round, or split
Pulpwood camps
Pulpwood contractors engaged in cutting
Rails, fence: round or split
Saw logs
Skidding logs
Stumping for turpentine or powder manufacturing
Stumps
Timber (product of logging camps)
Veneer logs
Wood chips, produced in the field

242 SAWMILLS AND PLANING MILLS

2421 Sawmills and Planing Mills, General

Establishments primarily engaged in sawing rough lumber and timber from logs and bolts, or resawing cants and flitches into lumber, including box lumber and softwood cut stock; planing mills combined with sawmills; and separately operated planing mills which are engaged primarily in producing surfaced lumber and standard workings or patterns of lumber. This industry includes establishments primarily engaged in sawing lath and railroad ties

Industry Group No. | Industry No.

242 SAWMILLS AND PLANING MILLS—Con.

2421 Sawmills and Planing Mills, General—Con.

and in producing tobacco hogshead stock, wood chips, and snow fence lath. Establishments primarily engaged in manufacturing box shook or boxes are classified in Industry Group 244; those manufacturing sash, doors, wood molding, window and door frames, and other fabricated millwork are classified in Industry Group 243; and those manufacturing hardwood dimension and flooring are classified in Industry 2426.

Cants, resawed (lumber)
Ceiling lumber, dressed
Chipper mills
Custom sawmills
Cut stock, softwood
Flitches (veneer stock), made in sawmills
Flooring (dressed lumber), softwood
Fuelwood, from mill waste
Furniture dimension stock, softwood
Kiln drying of lumber
Lath, made in sawmills and lathmills
Lumber stacking or sticking
Lumber: rough, sawed, or planed
Planing mills, independent: except millwork
Resawing lumber into smaller dimensions
Sawdust and shavings
Sawmills, except special product mills
Siding, dressed lumber
Silo stock, wood: sawed
Snow fence lath
Stud mills
Ties, railroad: sawed
Tobacco hogshead stock
Wood chips produced at mill

2426 Hardwood Dimension and Flooring Mills

Establishments primarily engaged in manufacturing hardwood dimension lumber and workings therefrom; and other hardwood dimension, semifabricated or ready for assembly; hardwood flooring; and wood frames for household furniture. Establishments primarily engaged in manufacturing stairwork, molding, and trim are classified in Industry 2431; and those manufacturing textile machinery bobbins, picker sticks, and shuttles are classified in Industry 3552.

Blanks, wood: for bowling pins, handles, and textile machinery accessories
Blocks, wood: for bowling pins, handles, and textile machinery accessories
Bobbin blocks and blanks, wood
Brush blocks, wood: turned and shaped
Carvings, furniture: wood
Chair frames for upholstered furniture, wood
Chair seats, hardwood
Dimension, hardwood
Flooring, hardwood
Frames for upholstered furniture, wood
Furniture dimension stock, hardwood
Furniture squares, hardwood
Furniture turnings and carvings, wood
Gun stocks, wood
Handle blanks, wood
Handle stock, sawed or planed
Lumber, hardwood dimension
Parquet flooring, hardwood
Picker stick blanks
Rounds or rungs, ladder and furniture: hardwood
Shuttle blocks: hardwood
Spool blocks and blanks, wood
Stock, chair: hardwood—turned, shaped, or carved
Table slides, for extension tables: wood
Turnings, furniture: wood
Vehicle stock, hardwood

2429 Special Product Sawmills, Not Elsewhere Classified

Mills primarily engaged in manufacturing excelsior, wood shingles, and cooperage stock; and in sawing special products, not elsewhere classified.

Barrel heading and staves, sawed or split
Cooperage stock mills
Cooperage stock: staves, heading, and hoops—sawed or split
Excelsior, including pads and wrappers: wood
Hoops, wood: for tight or slack cooperage—sawed or split
Sawmills, special product: except lumber and veneer mills
Shakes (hand split shingles)
Shingle mills, wood
Shingles, wood: sawed or hand split
Wood wool (excelsior)
Wrappers, excelsior

Industry Group No. 243

MILLWORK, VENEER, PLYWOOD, AND STRUCTURAL WOOD MEMBERS

2431 Millwork

Establishments primarily engaged in manufacturing fabricated wood millwork, including wood millwork covered with materials such as metal and plastics. Planing mills primarily engaged in producing millwork are included in this industry, but planing mills primarily producing standard workings or patterns of lumber are classified in Industry 2421. Establishments primarily manufacturing wood kitchen cabinets and bathroom vanities for permanent installation are classified in Industry 2434.

Awnings, wood
Blinds (shutters), wood
Brackets, wood
Door jambs, wood
Door trim, wood
Door units, prehung: wood and covered wood
Doors, combination screen-storm: wood
Doors, wood and covered wood
Floor baseboards, wood
Garage doors, overhead: wood
Jalousies, glass: wood frame
Louver windows and doors, glass with wood frame
Millwork products
Moldings, wood and covered wood: unfinished and prefinished
Newel posts, wood
Ornamental woodwork: e.g., cornices and mantels
Panel work, wood
Planing mills, millwork
Porch work, wood
Railings, stair: wood
Sash, door and window: wood and covered wood
Screens, door and window: wood
Shutters, door and window: wood and covered wood
Silo staves, wood
Stairways and stairs, wood
Trellises, wood
Trim, wood and covered wood
Venetian blind slats, wood
Wainscots, wood
Weather strip, wood
Window frames and sash, wood and covered wood
Window screens, wood
Window trim, wood and covered wood
Window units, wood and covered wood
Woodwork, interior and ornamental: e.g., windows, doors, sash, and mantels

2434 Wood Kitchen Cabinets

Establishments primarily engaged in manufacturing wood kitchen cabinets and wood bathroom vanities, generally for permanent installation. Establishments primarily engaged in manufacturing free-standing cabinets and vanities are classified in Major Group 25. Establishments primarily engaged in building custom cabinets for individuals are classified in Retail Trade, Industry 5712.

Cabinets, wood: to be installed
Kitchen cabinets, wood: to be installed
Vanities, bathroom, wood: to be installed

2435 Hardwood Veneer and Plywood

Establishments primarily engaged in producing commercial hardwood veneer and those primarily engaged in manufacturing commercial plywood or prefinished hardwood plywood. This includes nonwood backed or faced veneer and nonwood faced plywood, from veneer produced in the same establishment or from purchased veneer. Establishments primarily engaged in the production of veneer which is used in the same establishment for the manufacture of wood containers, such as fruit and vegetable baskets and wood boxes are classified in Industry Group 244.

Hardwood plywood composite
Hardwood veneer or plywood
Panels, hardwood plywood
Plywood, hardwood or hardwood faced
Prefinished hardwood plywood
Veneer mills, hardwood

Industry Group No. | Industry No

243 MILLWORK, VENEER, PLYWOOD, AND STRUCTURAL WOOD MEMBERS—Con.

2436 Softwood Veneer and Plywood

Establishments primarily engaged in producing commercial softwood veneer and plywood, from veneer produced in the same establishment or from purchased veneer. Establishments primarily engaged in producing commercial hardwood veneer and plywood are classified in Industry 2435. Establishments primarily engaged in the production of veneer which is used in the same establishment for the manufacture of wood containers such as fruit and vegetable baskets and wood boxes are classified in Industry Group 244.

Panels, softwood plywood
Plywood, softwood
Softwood plywood composites
Softwood veneer or plywood
Veneer mills, softwood

2439 Structural Wood Members, Not Elsewhere Classified

Establishments primarily engaged in producing laminated or fabricated trusses, arches, and other structural members of lumber. Establishments primarily engaged in fabrication on the site of construction are classified in Division C, Construction. Establishments primarily engaged in producing prefabricated wood buildings, sections, and panels are classified in Industry 2452.

Structural members, laminated wood: arches, trusses, timbers, and parallel chord ceilings
Trusses, wood

244 WOOD CONTAINERS

2441 Nailed and Lock Corner Wood Boxes and Shook

Establishments primarily engaged in manufacturing nailed and lock corner wood boxes (lumber or plywood), and shook for nailed and lock corner boxes.

Ammunition boxes, wood
Box shooks, wood
Boxes, wood: plain or fabric covered, nailed or lock corner
Carrier trays, wood
Chests for tools, wood
Cigar boxes, wood and part wood
Egg cases, wood
Flats, wood: greenhouse
Packing cases, wood: nailed or lock corner
Shipping cases, wood: nailed or lock corner
Shook, box
Trunk skids, wood

2448 Wood Pallets and Skids

Establishments primarily engaged in manufacturing wood or wood and metal combination pallets and skids.

Pallet containers, wood or wood and metal combination
Pallets, wood or wood and metal combination

2449 Wood Containers, Not Elsewhere Classified

Establishments primarily engaged in manufacturing wood containers, not elsewhere classified, such as cooperage, wirebound boxes and crates, and other veneer and plywood containers. Establishments primarily engaged in manufacturing tobacco hogshead stock are classified in Industry 2421, and those manufacturing cooperage stock are classified in Industry 2429.

Barrels, wood: coopered
Baskets, fruit and vegetable: e.g., till, berry, climax, round stave
Berry cups, veneer and splint
Boxes, wood: wirebound
Buckets, wood: coopered
Casks, wood: coopered
Chicken coops (crates), wood: wirebound for shipping poultry
Climax baskets

Industry Group No. | Industry No

244 WOOD CONTAINERS—Con.

2449 Wood Containers, Not Elsewhere Classified—Con.

Containers made of staves
Containers, veneer and plywood: except nailed and lock corner boxes
Cooperage
Coopered tubs
Crates: berry, butter, fruit, and vegetable—wood, wirebound
Drums, plywood
Drums, shipping: wood—wirebound
Firkins and kits, wood: coopered
Fruit baskets, veneer and splint
Hampers, fruit and vegetable: veneer and splint
Hogsheads, wood: coopered
Hot tubs, coopered
Kegs, wood: coopered
Kits, wood: coopered
Market baskets, fruit and vegetable: veneer and splint
Pails, plywood
Pails, wood: coopered
Splint baskets, for fruits and vegetables
Tanks, wood: coopered
Tierces (cooperage)
Till baskets, veneer and splint
Tobacco hogsheads
Tubs, wood: coopered
Vats, wood: coopered
Vegetable baskets, veneer and splint

245 WOOD BUILDINGS AND MOBILE HOMES

2451 Mobile Homes

Establishments primarily engaged in manufacturing mobile homes and nonresidential mobile buildings. These units are generally more than 35 feet long, at least 8 feet wide, do not have facilities fo storage of water or waste, and are equipped with wheels. Trailers that are generally 35 feet long or less, 8 feet wide or less, and with self-contained facilities are classified in Industry 3792. Portable wood buildings not equipped with wheels are classified in Industry 2452.

Buildings, mobile: commercial use
Mobile buildings for commercial use (e.g., offices, banks)
Mobile classrooms
Mobile dwellings
Mobile homes, except recreational

2452 Prefabricated Wood Buildings and Components

Establishments primarily engaged in manufacturing prefabricated wood buildings, sections, and panels. Establishments primarily engaged in fabricating buildings on the site of construction are classified in Division C, Construction.

Buildings, prefabricated and portable: wood
Chicken coops, prefabricated: wood
Corn cribs, prefabricated: wood
Farm buildings, prefabricated or portable: wood
Floors, prefabricated: wood
Geodesic domes, prefabricated: wood
Houses, portable: prefabricated wood—except mobile homes
Log cabins, prefabricated: wood
Marinas, prefabricated: wood
Panels for prefabricated wood buildings
Sauna rooms, prefabricated: wood
Sections for prefabricated wood buildings

249 MISCELLANEOUS WOOD PRODUCTS

2491 Wood Preserving

Establishments primarily engaged in treating wood, sawed or planed in other establishments, with creosote or other preservatives to prevent decay and to protect against fire and insects. This industry also includes the cutting, treating, and selling of poles, posts, and piling, but establishments primarily engaged in manufacturing other wood products, which they may also treat with preservatives, are not included.

Bridges and trestles, wood: treated
Creosoting of wood
Crossties, treated
Flooring, wood block: treated
Millwork, treated
Mine props, treated
Mine ties, wood: treated
Piles, foundation and marine construc-

Industry Group No. | Industry No.

249 MISCELLANEOUS WOOD PRODUCTS—Con.

2191 Wood Preserving—Con.

tion: treated
Piling, wood: treated
Poles and pole crossarms, treated
Poles, cutting and preserving
Posts, wood: treated
Preserving of wood (creosoting)
Railroad cross bridge and switch ties, treated
Railway crossties, wood: treated
Structural lumber and timber, treated
Vehicle lumber, treated
Wood fence: pickets, poling, rails—treated
Wood products, creosoted

2493 Reconstituted Wood Products

Establishments primarily engaged in manufacturing reconstituted wood products. Important products of this industry are hardboard, particleboard, insulation board, medium density fiberboard, waferboard, and oriented strandboard.

Board, bagasse
Flakeboard
Hardboard
Insulating siding, board—mitac
Insulation board, cellular fiber or hard pressed (without gypsum)—mitac
Lath, fiber
MDF (medium density fiberboard)
Medium density fiberboard (MDF)
Particleboard
Reconstituted wood panels
Strandboard, oriented
Waferboard
Wall tile, fiberboard
Wallboard, wood fiber: cellular fiber or hard pressed—mitac

2499 Wood Products, Not Elsewhere Classified

Establishments primarily engaged in manufacturing miscellaneous wood products, not elsewhere classified, and products from rattan, reed, splint, straw, veneer, veneer strips, wicker, and willow.

Applicators, wood
Bakers' equipment, wood
Baskets, except fruit, vegetable, fish, and belt: (e.g., rattan, reed, straw)
Battery separators, wood
Bearings, wood
Beekeeping supplies, wood
Beerwood (steam bent) products, except furniture
Blocks, tackle: wood
Blocks, tailors' pressing: wood
Boards, bulletin: wood and cork
Boards: chip, ironing, meat and pastry—wood
Boot and shoe lasts, regardless of material
Bowls, wood: turned and shaped
Briquettes, sawdust or bagasse: nonpetroleum binder
Bungs, wood
Buoys, cork
Bushings, wood
Cane, chair: woven of reed or rattan
Carpets, cork
Cloth winding reels, wood
Clothes dryers (clothes horses), wood
Clothes drying frames, wood
Clothespins, wood
Clubs, police: wood
Cooling towers, wood or wood and sheet metal combination
Cork products
Corks, bottle
Covers, bottle and demijohn: willow, rattan, and reed
Curtain stretchers, wood
Dishes, wood
Display forms for boots and shoes, regardless of material
Dowels, wood
Extension planks, wood
Faucets, wood
Follies, wood
Fencing, wood: except rough pickets, poles, and rails
Firewood and fuel wood containing fuel binder
Flour, wood
Frames: medallion, mirror, photograph, and picture—wood or metal
Furniture inlays (veneers)
Garment hangers, wood
Gavels, wood
Grain measures, wood: turned and shaped
Hammers, meat: wood
Hampers, laundry: rattan, reed, splint, veneer, and willow
Handles, wood: turned and shaped
Hubs, wood
Insulating materials, cork
Jacks, ladder: wood
Knobs, wood
Ladders, wood
Last sole patterns, regardless of material
Letters, wood
Life preservers, cork
Mallets, wood
Market baskets, except fruit and vegetable: veneer and splint
Marquetry, wood
Mashers, potato: wood
Masts, wood
Mauls, wood
Moldings, picture frame: finished
Novelties, wood fiber
Oars, wood

Industry Group No. | Industry No.

249 MISCELLANEOUS WOOD PRODUCTS—Con.

2499 Wood Products, Not Elsewhere Classified—Con.

Pads, table: rattan, reed, and willow
Paint sticks, wood
Pencil slats
Plugs, wood
Poles, wood: e.g., clothesline, tent, flag
Pressed logs of sawdust and other wood particles, nonpetroleum binder
Pulleys, wood
Racks, for drying clothes: wood
Rattan ware, except furniture
Reed ware, except furniture
Reels, cloth winding: wood
Reels, for drying clothes: wood
Reels, plywood
Rollers, wood
Rolling pins, wood
Rules and rulers: wood, except slide
Saddle trees, wood
Sawdust, reground
Scaffolds, wood
Scoops, wood
Seat covers, rattan
Seats, toilet: wood
Shoe stretchers, regardless of material
Shoe trees, regardless of material
Signboards, wood
Skewers, wood
Snow fence
Spars, wood
Spigots, wood
Spokes, wood
Spools, except for textile machinery: wood
Stakes, surveyors': wood
Stepladders, wood
Stoppers, cork
Tile, cork
Tool handles, wood: turned and shaped
Toothpicks, wood
Trays: wood, wicker, and bagasse
Trophy bases, wood
Vats, wood: except coopered
Washboards, wood and part wood
Webbing: cane, reed, and rattan
Willow ware, except furniture
Wood, except furniture: turned and carved
Woodenware, kitchen and household
Yardsticks, wood

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UNITED STATES DISTRICT COURT
DISTRICT OF OREGON

NORTHWEST ENVIRONMENTAL DEFENSE CENTER, an Oregon non-profit corporation,

Plaintiff,

v.

MARVIN BROWN, *et al.*,

Defendants.

and

OREGON FOREST INDUSTRIES COUNCIL, an Oregon nonprofit corporation; **AMERICAN FOREST AND PAPER ASSOCIATION**, a Delaware nonprofit corporation; and **TILLAMOOK COUNTY**, a political subdivision of the State of Oregon,

Intervenors.

Case No.: 06-1270-KI

PLAINTIFF'S SECOND REQUEST FOR JUDICIAL NOTICE

Plaintiff Northwest Environmental Defense Center ("NEDC") hereby requests that the Court take judicial notice of the following documents pursuant to Federal Rule of Evidence 201:

1. The Oregon Department of Forestry's June 20, 2003, Forest Practices Technical Note Number 8, *Installation and Maintenance of Cross Drainage Systems on Forest Roads* (Exhibit 1).

2. Excerpts from the Oregon Department of Forestry's July 2000 *Forest Roads Manual* (Exhibit 2).

The documents submitted by Plaintiff are properly before the Court on a request for judicial notice. Facts subject to judicial notice may be considered on a motion to dismiss. *Mullis v. United State Bank Ct.*, 828 F.2d 1385, 1388 (9th Cir. 1987). All of the documents submitted by NEDC are documents produced by state agencies and are subject to judicial notice pursuant to FRE 201. *PG&E v. Lynch*, 216 F.Supp.2d 1016, 1026 (N.D. Cal. 2002) (official public records of the California Public Utilities Commission subject to judicial notice). The contents of these agency documents are "adjudicative facts" that are not subject to reasonable dispute. FRE 201(a)-(b). The accuracy of the documents is also capable of accurate and ready determination by resort to sources whose accuracy cannot be reasonably be questioned. *Id.*

RESPECTFULLY SUBMITTED this 10th day of January, 2007.

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Installation and Maintenance of Cross Drainage Systems on Forest Roads

Forest Practices Technical Note Number 8
Version 1.0

June 20, 2003

Objective: Technical notes are written to help resource professionals, in this case engineers and foresters responsible for road design or maintenance. This note provides technical guidance on recent road drainage rule revisions. Effective road drainage controls runoff waters and directs these waters to locations where they have little or no effect on water quality. This note does not provide information on stream crossing structures. Forest Practices Technical Notes 4 and 5 provide guidance on stream crossing structures.

Resource Issues: A Forest Practices Advisory Committee (FPAC) was assembled in 1999 to review existing forest practices and make recommendations to effectively protect salmon habitat and water quality. After review of the scientific and monitoring data, the FPAC made the following recommendations to improve drainage of forest roads:
1) better clarify the objectives of the road drainage rules so that the risk of sediment delivery to waters of the state from new roads is minimized, and
2) require additional cross drainage installation as a maintenance requirement prior to an operation when current road condition and a proposed use will impair water quality.

Effective road drainage is necessary to protect the road prism from damage, to keep the road surface stable, and to allow efficient forest management. Good drainage for

resource protection also helps ensure a stable, effective forest road. Proper drainage allows full use of forest roads and reduces maintenance and repair costs. Based on the results of recent Rule Compliance; Wet Season Road Use; Storm Impacts and Landslides of 1996; and Road Sediment monitoring projects, it is important to pay special attention to drainage if the following situations are encountered:

- Near stream crossings and in wetlands;
- On roads that are parallel to and very close to streams;
- On roads where use is changing from inactive to active timber haul;
- When reconstructing old roads, especially sidecast constructed roads on slopes steeper than 60%; and
- On existing roads where gullies have developed in the ditch or at culvert outlets.

Forest Practice Rules: The Board of Forestry adopted revised rules that were effective on January 1, 2003. The rule for road design (for new and reconstructed roads) has been clarified. There is now a clear priority for locating cross-drainage structures. The substance of this rule has not been changed, as shown below. The road maintenance (for older roads) rules have been modified, with a new requirement to install additional drainage where needed to protect water quality (see page 12 of this Note).

OAR 629-625-0330
Drainage

(1) The purpose of this rule is to provide a drainage system on new and reconstructed roads that minimizes alteration of stream channels and the risk of sediment delivery to waters of the state. Drainage structures should be located based on the priority listed below. When there is a conflict between the requirements of sections (2) through (6) of this rule, the lowest numbered section takes precedence, and the later-numbered and conflicting section shall not be implemented.

(2) Operators shall not concentrate road drainage water into headwalls, slide areas, high landslide hazard locations, or steep erodible fillslopes.

(3) Operators shall not divert water from stream channels into roadside ditches.

(4) Operators shall install dips, water bars, or cross drainage culverts above and away from stream crossings so that road drainage water may be filtered before entering waters of the state.

(5) Operators shall provide drainage when roads cross or expose springs, seeps, or wet areas.

(6) Operators shall provide a drainage system using grade reversals, surface sloping, ditches, culverts and/or waterbars as necessary to minimize development of gully erosion of the road prism or slopes below the road.

DRAINAGE SYSTEM FOR NEW AND RECONSTRUCTED ROADS

The road drainage rule now provides a specific order for locating road drainage structures. Where there are conflicts, use the following priority order for placing drainage structures.

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A) Do not collect drainage and discharge it on steep slopes, headwalls, and active and recently active landslide areas, since additional water can trigger landslide movement. **This may require routing drainage to stream channels.**
B) Place stream crossing structures at all stream channels, so streams are never running in a ditch.
C) Provide a cross drainage structure for filtering immediately upstream from stream crossings to allow muddy runoff to seep into the forest floor.
D) When wet areas are crossed, provide drainage to keep water from affecting the road surface.
E) The **last** item is to slope the road so that the need for cross drains is reduced and to place essential cross drains on the rest of the road at a spacing that will prevent gully formation (either in the ditch, or below the cross-drain).

Road reconstruction includes any road re-location, widening, or replacement of stream crossing structures. It does not include removal of brush, bank slough, or the addition of or replacement of cross drainage structures alone. The road design rules, including 629-625-330, apply directly only to the road segments under reconstruction and to new construction. However, if existing road drainage is inadequate, the department may direct drainage repairs on all portions of the road under OAR 629-625-600 (9), as described later in this Technical Note.

A. Road drainage and landslides

Science and monitoring

Robison and others (1999) and other studies have found that road drainage waters directed onto landslide prone locations increases the risk of landslides. Since landslides can cause very large inputs of sediment, it is a priority to reduce landslide occurrence. Locations where added water is most likely to increase landslide occurrence include high landslide hazard locations, especially headwalls; existing landslide deposits; and steep fillslopes. Each of these terms is defined below.

Terminology

Headwalls are steep, concave slopes that do not contain stream channels. The headwalls of greatest concern meet the high landslide hazard slope steepness criteria (see below). However, concentration of drainage to any headwall steeper than around 60 percent can also trigger landslides.

Slide areas include all active and recently active landslide deposits. There are two common slope forms for slide areas: 1) an upper scarp, main body, and toe (Figure 1) or 2) multiple scarps and hummocks (Figure 2). Some slides may pre-date the age of the stand of trees currently on the site. The fact that the trees are straight does not necessarily imply the landslide is inactive.

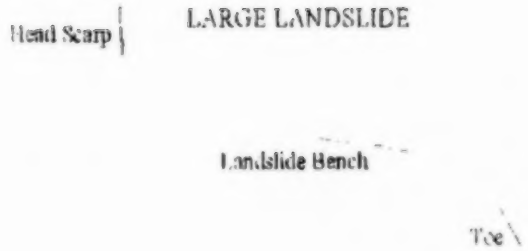

Figure 1. Shape of deep-seated landslide; scale on order of 50 to 1000 feet.

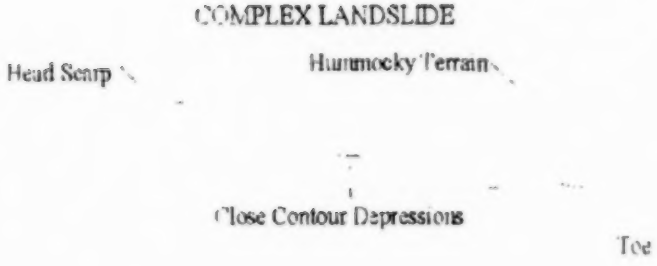

Figure 2. Common ground features of complex landslides; scale on order of thousands of feet.

Steep erodible fillslopes include any fills of mostly soil and over 2 feet thick on slopes over 60 percent, or over 50 percent if soils are wet (springs or seeps during the wet season) or within 100 feet of streams.

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High landslide hazard locations are defined by OAR 629-600-0100 (31) as specific sites that are subject to initiation of a shallow, rapidly moving landslide. The specific criteria for determination of these sites is found in 629-623-0100 (3) as

(a) The presence, as measured on site, of any slope in western Oregon (excluding competent rock outcrops) steeper than 80 percent, except in the Tyee Core Area, where it is any slope steeper than 75 percent; or

(b) The presence, as measured on site, of any headwall or draw in western Oregon steeper than 70 percent, except in the Tyee Core Area, where it is any headwall or draw steeper than 65 percent.

(c) Notwithstanding the slopes specified in (a) or (b) above, field identification of atypical conditions by a geotechnical specialist may be used to develop site specific slope steepness thresholds for any part of the state where the hazard is equivalent to (a) or (b) above. The State Forester shall make the final determination of equivalent hazard. *For more information on high landslide hazard locations, see Forest Practices Technical Note # 2.*

Concentration of road drainage means collecting drainage from one location and directing it to a location where it had not flown to prior to road construction. A serious example of improper drainage concentration is a ditch that carries water from one headwall and discharges water to another headwall. Another example is a ditch that carries water from off of an active or recently active landslide and discharges water onto an active or recently active landslide.

Implementation

Most landslide prone locations can be identified during field reconnaissance during road layout. Use of an accurate clinometer and observation of slope form looking for headwalls (visibly concave steep slopes), scarps (local, very steep slopes) and hummocky (irregular) terrain are the tools needed to identify potentially unstable terrain.

Drainage structures should not be located to discharge onto headwalls, except in cases where drainage water can be directed onto headwalls that have previously failed and are scoured to rock. When roads are constructed across continuous high landslide hazard locations, cross drains should be placed so that drainage flows to convex or uniform slopes near each spur ridge. For existing landslides, cross drainage should be placed just above the location before the road begins to enter the existing landslide area.

B. Avoiding diversion of stream channels

Science and Monitoring

Ditches normally have finer soil material than do stream bed and banks, thus are more easily eroded. When stream flows are diverted onto these more erodible materials, increased erosion is almost certain. In addition, research and monitoring have also shown that sediments are also easily eroded from road surface. ODF monitoring turbidity in streams increased in proportion to the flow observed in ditches. When streams are

diverted into ditches, there is no opportunity to filter sediments to the forest floor (see Section C of this Technical Note).

Terminology

Stream channels have defined bed and banks, meaning that there has been sorting of material by flow. Streambeds contain less fine soil particles than surrounding soils.

A ***gully*** is a trench of at least 6 inches in depth carved into soil, rock or fill by runoff and not located in a channel, in a location where eroded material can be deposited into waters of the state. Gullies are distinguished from stream channels by the lack of sorting of materials. Gullies are formed by infrequent rainfall events or redirection of surface drainage, and disappear over time if drainage is re-directed.

Implementation

This rule is very simple, always place a culvert at stream crossing locations. Never use a roadside ditch to connect two stream channels. Limited excavation further from the road can be acceptable in cases where small streams come together at the crossing.

C. Cross drains for filtering

Science and Monitoring

The forest floor can usually absorb large amounts of water, and can be used to greatly reduce the potential for muddy runoff entering streams. In western Oregon, undisturbed forest soils can often absorb over 10 inches of water per hour. When muddy runoff waters are directed to these soils, water flows into the ground, leaving the road-generated sediment on the forest floor. Research has shown that sediment plumes typically extend from about 5 feet to 130 feet below cross drain culverts (except when gullies form, which often extend to stream channels). The distance muddy runoff water travels increases with road grade and spacing to the next cross drainage structure.

The recently completed wet season road use monitoring study found that, after rainfall, the factor that had the greatest effect on turbidity was the length of road delivering to streams. This appears to have been a more significant factor than surfacing durability.

Implementation

Drainage waters must be directed onto undisturbed soils. Cross drains need to be installed as close to stream crossings as possible and allow between 15 and 200 feet of ground filtering between the outlet of the cross drain and the high water level of the stream, as measured from the stream (Figure 4). The distance depends in part on the slope of the ground below the drain discharge, the road grade and the distance to the next culvert up the road (see Table 1).

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Figure 4. Installation of cross-drains above stream crossings to effectively filter muddy runoff.

Table 1. Suggested distances for filtering

Road grade	Distance to next cross-drain up road		
	under 300 feet	300-600 feet	over 600 feet
0 to 5 %	15 ft	30 ft	50 ft
6 to 12 %	30 ft	60 ft	100 ft
13 to 19 %	50 ft	100 ft	150 ft
over 20 %	60 ft	120 ft	200 ft

Cross drains should be 50 to 200 feet from the stream crossing, as measured along the road (Figure 4). For effective filtering, soils must not have been disturbed by logging

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equipment, should include no fill, and slope steepness should be less than 60 percent, if possible. For continuous high landslide hazard locations, or sections of steep fill too long for half rounds, ditch flow may need to discharge directly into streams. Also, if soils are disturbed, additional filtering distance is required.

D. Drainage of wet areas

Science and Monitoring

Water saturation on the road surface greatly reduces the strength of that surface. This results in erosion of the surface, and also results in a road that may not be driveable. In most cases, there are many solutions for drainage of a wet surface.

Terminology

Springs flow from a single location for all or most of the year, and have a significant flow at some time of the year.

Seeps flow from multiple locations, each seep has little flow volume.

Wet areas are locations where soil is saturated or nearly saturated during periods when the road is used.

Implementation

If flows are high, a culvert should be installed at the location of the spring or seeps, so that the potential for ditch erosion, and movement of surface fines from the road is eliminated. As a rule of thumb, high flow is considered to be that which fills a 5-gallon bucket in a minute.

Soil fill should not be placed directly on wet areas since it will become soft and lead to an unstable surface. For areas with moderately wet soils, a free-draining gravel at the base of the fill can be used in most cases. If the flow is significant or soils are very soft or unstable, a perforated culvert or a French drain (gravel wrapped in geotextile) may also be needed. Geotextiles placed on top of wet areas can effectively separate wet soils from the road surface materials if the geotextiles are not damaged during construction or use.

E. Road drainage system

Science and Monitoring

Monitoring of road drainage systems has found that most landowners in western Oregon use a crowned surface for permanent roads. Most temporary roads have limited surface shaping. Waterbars are generally installed on temporary roads after use. There is little research on the suitability of outsloping for permanent roads. Outsloped roads are not considered suitable for road grades exceeding 8% unless the road is rocked and not used when snow or ice are present.

E (1). Selecting a drainage system

A drainage system includes surface sloping and structures to direct water away from the road prism. There are many drainage system components and options available for almost every road, and any road can and usually should use different drainage systems as conditions change. The choice of appropriate drainage systems depends on whether the road is permanent or temporary, season of use, haul volume, local climate, soil and rock conditions, and landowner needs. The following section discusses advantages and disadvantages of the major drainage systems.

Surface shape: Permanent roads must have one of three shapes: crowned, outsloped or insloped. Use of multiple shapes on the same road is also acceptable. Temporary roads may be constructed with little surface slope as long as cross ditches or other structures are installed prior to periods when rainfall or snowmelt can be expected. Temporary roads must have drainage structures installed at all stream crossings, and also on all road segments over 1000 feet in length that do not have grade reversals.

Terminology

Crowned roads provide the best drainage for roads with high traffic use, or for roads that are used during the wet season.

Insloping of road is usually only appropriate for short stretches where the slope below the road is potentially unstable.

Outsloped roads are best on lower use roads with gradients under 8 percent. They should be augmented with waterbars or other drainage structures if there is potential for any traffic (including unauthorized) or if they are used on pitches steeper than 8 percent. Waterbars should also be installed or reinstalled to filter water next to all stream crossings prior to each wet season.

E (2). Cross-drainage structures

Science and Monitoring

Soil properties and road grade have a major influence on ditch erosion and potential for gullies to develop (Arnold, 1957). ODF monitoring found that culverts comprise about 35 percent of the cross drainage structures use on forest roads in western Oregon. Waterbars and ditch-outs each make up about 15 percent the cross drainage structures used in western Oregon. Many roads also had non-engineered drainage features (water flowing across the road without any structure). ODF monitoring also found that roads with steeper grades (over 9 percent) often had fewer cross drains than less steep roads, with spacing exceeding that recommended to reduce ditch erosion.

Implementation

The location and installation of cross-drainage structures is the final element of drainage, and recognizes there are many ways to drain a road. Local experience is important here. First, look for opportunities that do not require the use of structures across the road. Use of ditch-outs as roads cross ridges is very effective, as are grade reversals. Cross drains must be placed more frequently as road grades get steeper and in more erodible materials, like decomposed granite. The culvert spacing guidelines in Table 2 are based on Arnold (1957) but have been simplified to consider only two soil types, normal and erodible. Most soils are considered normal. Erodible soils include decomposed granitics in southwest Oregon, volcanic ash in eastern Oregon, and any soils with natural gullies or a history of surface erosion problems at that location.

Table 2. Typical minimum culvert spacing for erosion control

	Culverts draining to forest floor	
Road Grade	**Normal Soils**	**Erodible Soils**
0 to 1 % dry season	1500 feet	1000 feet
*0 to 1 % wet season**	*300 feet*	*300 feet*
2 to 5 %	1000 feet	700 feet
6 to 12 %	700 feet	400 feet
13 to 19 %	400 feet	250 feet
over 20 %	250 feet	150 feet

* *water ponds on flat grades so extra drainage is needed for roads used during wet periods*

Table 2 is applicable for effective, well-maintained structures only. If waterbars are used, they should be installed at closer spacing, since waterbars can be easily damaged if filled with sediment by traffic (authorized or unauthorized). Note that the lengths in Table 2 are typical, and should always be adjusted to make sense for local conditions. If another local criteria effectively works to keep sediment out of streams, it should be used instead of the criteria in Table 2.

Standard drainage structures

Culverts are usually metal or plastic, with a standard recommended diameter of 18 inches. Culverts are the drainage structure of choice for high volume roads in western Oregon that are used during the wet season. Culverts are typically galvanized steel or heavy plastic. Plastic relief culverts are easier to install, have a longer life expectancy, and are less likely to be damaged by maintenance activities, but are flammable.

Ditches are inboard trenches large enough to carry the highest expected flow, taking into account likely erosion and growth of vegetation. They carry water between drainage structures on crowned roads and are usually at least 2 feet wide and 1 foot deep.

Waterbars are diagonal berms made by cutting and filling across the road. Waterbars are very effective on roads with low speed and light traffic volume. They are best installed or reinstalled after active timber hauling operations, as they require periodic rebuilding.

Dips are fairly gentle grade reversals of the road surface. The lowest point of the dip must be lower in elevation that rise further down the road. They are generally not useable for wet season use roads (especially for high volume). On gentle road grades rolling dips allow moderate vehicle speeds. For steep grades, dips slow traffic greatly, so not usually chosen for mainlines in steep terrain.

Cross-ditches are appropriate only on roads with no traffic. They must be removed prior to use by traffic. They are very effective at getting water across the road, though are subject to vandalism by persons wishing to have vehicular access. Cross ditches do not normally require maintenance unless they have been vandalized or otherwise removed.

Ditch-outs are short ditches installed at or near ridgelines near where roads cross the ridge. They are very low cost, and should be installed at every ridge crossing if drainage would not naturally flow off the road.

Grade reversals are high points in the road. Design using grade reversals reduces the number of other cross-drains needed.

Alternative drainage structures

Rubber flap water diverters are constructed with "sheets" of heavy flexible rubber or plastic (usually industrial conveyor belting) attached to timbers. The timbers are buried in the road surface, so that the flexible material extends out (about 3 inches) and can deflect water off the road. They are installed at an angle across the road, similar to waterbars. Roads must be outsloped for rubber water diverters to work..

French drains are used to drain wet areas. The are usually made by ditching through the wet area and back filling with clean gravel (usually river rock). Geotextiles are placed in the ditch and wrapped around the rock if soil is fine (mostly silt, clay or muck). If anticipated flows are high, a perforated pipe is also installed in the middle of the drainage

gravel. Design, installation technique and long term maintenance are all very important when considering French drains. Equipment operators can ruin an expensive French drain during routine maintenance if they are not aware where these are located.

Discouraged drainage structures

Open top culverts easily plug, and are difficult or impossible to clean.

Small diameter (under 15 inch) ***culverts*** plug very easily.

ROAD DRAINAGE IMPROVEMENT ON ACTIVE ROADS

Maintenance rule change
OAR 629-625-600(9) Where needed to protect water quality, as directed by the State Forester, operators shall place additional cross drainage structures on existing active roads within their ownership prior to hauling to meet the requirements of OAR 629-625-0330.

Protecting Water Quality

Road drainage must be improved when there is the likelihood of substantial sediment delivery if the drainage system is not upgraded. Inspection of road drainage on inactive roads prior to active road use is essential. Evidence of potential sediment delivery include the following conditions:

Road use changing - likely sediment delivery

- No cross drain structure (for filtering) within 200 feet of a stream crossing
- Streams running in roadside ditches

Road use not changing - likely sediment delivery on any road

- When gullies (over 100 feet in length) exist in a ditch, or below a cross drain
- Surface drainage waters flow into cracks on the outside edge of the road
- When more than 30 percent of the road system draining directly to streams or into gullies (a goal for a superior road is 15 percent)

Repairs for older roads

When repairing older roads, streams running down ditches need to be put back into the original channel. Other common repairs are adding cross drains for filtering above stream crossings, and installing new cross-drains where gullies have formed in the ditch or at culvert outlets. In general, the information on drainage of new roads as described earlier in this Technical Note are also appropriate for maintenance of older roads. Use any technique that efficiently fixes the problem.

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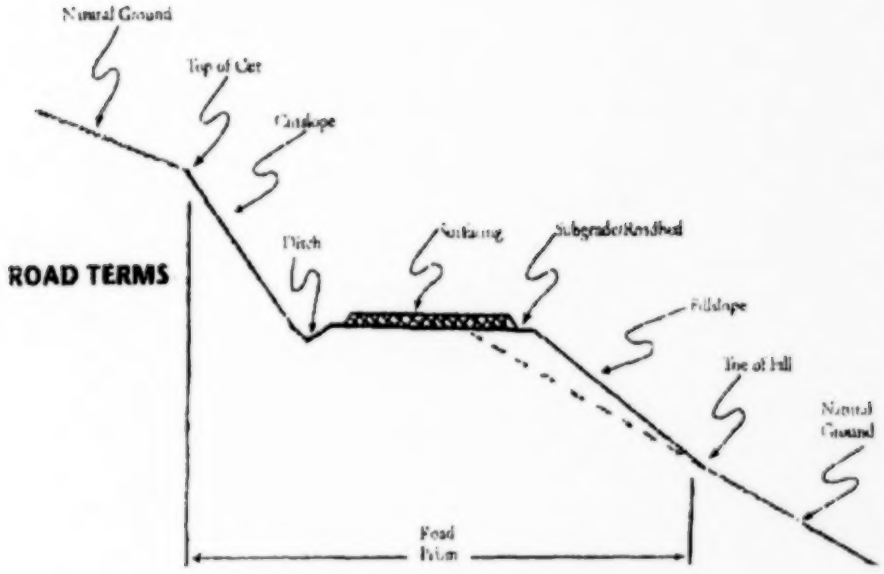
Oregon Department of Forestry



State Forests Program

Forest Roads Manual

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Introduction

A well planned, designed, constructed, and maintained system of forest roads is essential to facilitate forest management and protection of natural resources. Road design is the process of determining the "what, where, when, and how" for a new road construction, road improvement, or extra-ordinary road maintenance project. It begins after careful planning has determined that the project is necessary.

The designer of a project will consider the following factors:

- The purpose and intended use of the project. Included in this factor are length of use (temporary or permanent), amount of use (light, medium, or heavy), time of use (intermittent or continuous), and type of use (commercial, recreational, or administrative).
- The physical conditions affecting the project. Included in this factor are soils, topography, high risk sites, streams, wetlands, bedrock, weather, etc.
- Environmental conditions affecting the project. Included in this factor are fish bearing streams, threatened and endangered species, environmentally sensitive sites, scenic values, recreational use, etc.
- Benefits, costs, and risks associated with the project. Included in this factor is the consideration of alternative designs and locations for the project. The design will strive for maximizing benefits and minimizing costs and risks.

Goals of Road Design

1. Design roads that meet access needs.
2. Design roads to meet or exceed all Forest Practices Act road design rules to minize environmental impacts on natural resources.
3. Design roads that are economical to construct and maintain.

Objectives of Road Design

1. Facilitate building roads in the best locations to meet forest management needs and minimize impacts to natural resources.
2. Ensure that the proper standard of road is constructed to facilitate the projected use without overbuilding or excessive cost.
3. Provide drainage that removes water from the road prism before it can cause problems and that will:
   - Allow the use of roads during the seasons of desired use.
   - Minimize the impact on water quality and aquatic habitat that is caused by roads.
   - Maintain the stability of forest slopes that are impacted by roads.
   - Minimize the disruptions to natural drainage patterns.
   - Reduce the amount and cost of road maintenance.
   - Minimize the impacts if drainage failures occur.

4. Provide project direction that will aid efficient, economical construction of the project.
5. Provide road designs that contain accurate information to facilitate:
   - Clear communication of specifications and expectations for road projects. The written specifications should help project administrators and contractors construct projects as designed.
   - Accurate, fair cost estimates for construction projects, which will support doing the project as planned.

Road Design Strategies

Road design strategies are the specific actions and standards that will lead to achieving the goals and objectives of this section of the manual.

Engineering Procedures

The engineering procedures listed in this section are the minimum standards of engineering design work that will be utilized when designing road projects. The road designer should go beyond the minimum engineering procedures when circumstances dictate.

Generally, the engineering procedures that are utilized are dependent upon two factors. The first is the level of risk to natural resources posed by the road. The higher the chance that serious damage could occur to a natural resource as a result of the road project, the higher the level of engineering procedures that should be used to design the project. The second is the grade and alignment of the road. Steeper grades and more difficult alignments require higher levels of engineering procedures.

The road designer should visualize the desired finished road and determine what engineering procedures are needed to be sure that the project can and will be completed as desired. Unneeded engineering procedures waste time and energy in designing projects and may require wasteful construction practices. Likewise, not using adequate engineering procedures can result in the project not meeting objectives and damaging natural resources.

The road designer must be familiar with and understand the relationship between engineering procedures (this section) and road design standards (the following section). Engineering procedures and road design standards are not interchangeable. For example, to design a low use road may require upper level engineering procedures if a portion of the road crosses a high-risk site.

Base Level Engineering Procedures

Base level engineering procedures are applicable when all of the following criteria are met:

- Spur roads, usually less than ¼ mile in length, often temporary use.
- Gentle road grades that are less than 10%.
- Gentle side slopes of less than 35%, or ridgetop roads.
- High-risk sites or other Natural Resource concerns are not involved.

Base level engineering procedures include:

- Reconnaissance.
- Flag or stake centerline.
- Reference beginning and ending points and other control points as needed.

Mid-Level Engineering Procedures

Mid-level engineering procedures are applicable when one or more the following criteria are met:

- Spur roads longer than ¼ mile, usually permanent.
- A portion of the road has grades that exceed 10% but are less that 17%.
- A portion of the road is located on slopes greater than 35% but less than 60% and high-risk sites are not involved.

Mid-level engineering procedures will be applied to any portion of the road meeting the above criteria. Mid-level engineering procedures include:

- Reconnaissance of P-line(s) and topography.
- Run grade line.
- Field design final centerline location.
- Mark centerline with paint on stumps and hang flagging
- May be slope-staked, but generally reference tags are adequate (see section on "Referencing Centerline")

Upper Level Engineering Procedures

Upper level engineering procedures are used when one or more of the following criteria are met:

- Mainline roads.
- Portions of the road:
  a) Are located on slopes over 60%, or
  b) Cross a high-risk site, or
  c) Cross a sharp "V" draw, or
  d) Cross a sharp ridge and horizontal and/or vertical curves are a concern, or
  e) Have sections of "through cut" or fills where the fill or cut heights exceed 10 feet, or
  f) Cross fish bearing streams, or
  g) Have long stretches of continuous road grades greater than 16%, or
  h) Require end hauling, or
  i) Require critical alignment, or
  j) Cross through or are adjacent to environmentally sensitive sites.

Upper level engineering procedures will be applied to roads or portions of roads meeting the above criteria. Upper level engineering procedures include:

- Reconnaissance.
- P-Line.
- Grade Line.
- Plan.
- Profile.
- Office-locate L-line.
- Cross-section.
- Slope stake or reference L-line. (See section on "Referencing Centerline Location")

Where a planned road has segments that meet the criteria for upper level engineering procedures and the remainder of the road meets the criteria for base or mid level engineering procedures, a combination of procedures may be used. For example, a permanent spur road has moderate grades and is located on moderate slopes. However, it crosses a fish-bearing stream. The stream crossing will be designed using upper level engineering procedures, while the remainder of the road can be designed using mid-level engineering procedures.

Road Design Standards

Roads on state-owned forest land will be designed to meet the planned use of the road. The design will limit the alteration of natural slopes and drainage patterns to that which will safely accommodate the anticipated use of the road, protect water quality and aquatic habitat, and maintain site productivity. The standard of road will be consistent with good safety practices, while keeping construction and maintenance costs to a minimum.

When determining the road design standard, the following factors will be evaluated:

- The volume of traffic that will use the road at any given period of time and that will be expected to use the road over its duration.
- The type of vehicles that will use the road.
- The topography and soils where the road will be located.
- Duration of use (permanent, temporary, seasonal, or year around).
- Public use(s) of the road.
- Sensitive natural resources that may be affected by the road.
- Future road maintenance requirements.

Design Standards for Low Use Roads

Description: These are generally roads that are used for a short term, intermittently and/or have a low traffic volume. Use may be heavy during periods of log hauling but minimal at other times. May be temporary roads that are closed or vacated after use. May be operator-designed or "loggers choice" spur roads that require approval by the Department of Forestry. Oftentimes they are short (less than ¼ mile) spurs that access a single logging unit. May have seasonal restrictions on their use. May be administrative roads that are not used by the public or for commercial uses.

Design standards:

Subgrade	12 to 16 feet wide
Drainage	out-sloped or in-sloped (no ditch), dips, waterbars, temporary stream crossings (removed after road use is completed)
Surfacing	optional (pit or jaw run, if used)
Minimum curve radius	50 feet plus curve widening
*Grade limitations	up to 30%, roads over 20% will be vacated after use

Design Standards for Medium Use Roads

Description: These are generally semi-permanent or permanent usage roads that may access more than one logging unit, receive moderate use by the public during portions of the year, and/or provide important access for administrative purposes. Use may be heavy during periods of log hauling and light to moderate during other times. May need to accommodate heavy equipment and large yarders. May need to accommodate public use during portions of the year. May be closed and put in an inactive status during periods of non-use. Usually primary spur roads that are more than ¼ mile in length.

Design Standards:

Subgrade	14 to 16 feet wide with a 2 to 3 foot ditch
Drainage	insloped or crowned with ditch, relief culverts, and stream crossings.
Surfacing	optional (crushed rock, jaw or pit run if used)
Minimum curve radius	50 feet plus curve widening
*Grade limitations	up to 20%, usually under 18%

Design Standards for High Use Roads

Description: These are generally permanent roads that have high traffic volumes, higher speeds, movement of heavy equipment and/or a high level of public use during portions of the year. They are useable by a lowboy truck, which is a key design vehicle. May have high public and recreational usage during parts of the year. They are usually important roads for administrative purposes. And, they are usually a mainline road that accesses a large geographic area.

Design Standards:

Subgrade	16 to 22 feet wide plus a 3 foot ditch
Drainage	crowned, with ditches, relief culverts, and stream crossings including bridges
Surfacing	pit run, jaw run or crushed rock for base and crushed rock for driving surface
Minimum curve radius	70 feet plus curve widening
*Grade limitations	up to 14%

Grades over 20% require assist vehicles (OAR 437-80-065). Rock surfaced grades over 16% require special surfacing design to alleviate traction problems (consult geotechnical specialist or staff engineer).

Road Design Criteria

A number of criteria must be considered in designing roads. These are discussed in the following paragraphs.

Coordinated Planning and Location of Roads

Forest management operations planning and planning for forest transportation are dependent on each other. These two plans must be coordinated to provide for an efficient and effective overall plan. Professional foresters and forest engineers with knowledge, skills and abilities in the access requirements for forest management operations and the design, construction, and maintenance of forest roads make these important decisions. Management activities will be planned to take advantage of existing road systems when appropriate. Environmental and economical evaluations of both planned management operations and planned road construction/improvement will be performed to achieve the optimum design combination for the two activities. Careful planning and location of roads will ensure that roads are located where potential impacts to natural resources such as water quality and aquatic habitat are minimized. The areas served by each road will be maximized where possible; thus minimizing the amount of road needed to meet management objectives.

Reconnaissance

Reconnaissance involves reviewing the area and then identifying and evaluating the best locations for roads, landings and logging settings. Aerial photos, maps, and local knowledge as well as walking the ground are used to determine the best locations for the road. This is the time to identify potential control points such as landing locations, ridgetops, stream crossings, benches and other locations that may be desirable locations for the road. Location/reconnaissance will include a route assessment of alternatives and ending location(s). Sensitive natural resources on or near these routes will be identified. These include all streams (with special recognition for Type F(ish) and Type D(omestic), wetlands, slopes over 50 percent (especially high-risk sites), and wildlife sites. To avoid these resource areas, the road location will use grade and alignment changes up to the upper limits as defined in the road design standards. Where the sensitive natural resources cannot be avoided, minimize the length of road in these areas and direct the road away from them as quickly as possible. In addition, when it is necessary to cross these areas, the appropriate technical specialist(s) will be consulted (geotechnical specialist, wildlife/fish biologist, hydrologist, staff forest engineer, etc.).

Road Location

Road locations should minimize the risk of materials entering waters of the state and minimize disturbance to stream channels, lakes, wetlands and floodplains. Where viable alternatives exist, avoid locating roads on steep slopes, slide areas, or high-risk sites, and in wetlands, riparian management areas, channels or floodplains. When possible, avoid locating roads parallel to and in close proximity to streams because they have a higher than normal potential to deliver sediments directly into the channel. Roads that are close to and parallel streams also displace part of the riparian management area. Stream crossings will be as close as possible to a right angle in order to enter and exit the stream zone and the adjacent riparian management area as quickly as possible. Use variable grades and alignments to locate roads on the most suitable terrain.

Alternative road locations will be considered where natural resources are impacted. Locations will be favored that provide the best combination of meeting objectives and minimizing economic and environmental costs.

Make use of existing roads, where practical, to reduce the duplication of road systems and associated ground disturbance. Where roads are present on an adjacent ownership and the roads will adequately serve the planned forest management operation, investigate options for using those roads before constructing new roads.

Road Prism Design

Roads will be no wider than necessary to accommodate the anticipated use. See the ranges listed in the road design standards.

Roads will be designed to be constructed with a balanced cut and fill cross section where possible and where this does not pose a risk of slope instability. Where a balanced cross section is not used, excess excavation material should be used in the road design, when possible, and not wasted. Designs will call for full bench construction and end-hauling of excess excavation material when roads are located on steep slopes and/or high-risk sites.

To prevent fill failures, road designs will provide for stable fills by using compaction, buttressing, subsurface drainage, rock facing or other effective means.

Road Drainage

Good road drainage is one of the most important features designed into a road. The prompt removal of water from the road prism will help avoid many problems related to road construction and maintenance. Water is a critical factor affecting:

- Subgrade load bearing capacity (poor subgrade strength results in potential rutting caused by traffic)
- Slope stability
- Stream sedimentation

It is inevitable that roads will intercept, interrupt and interact with natural water flow patterns. The management of this interaction between roads and water is critical to a successful road system. Establishing proper drainage of water from roads and passage of water through roads is one of the most important techniques to minimize adverse impacts on water quality and aquatic habitat.

Surface Drainage

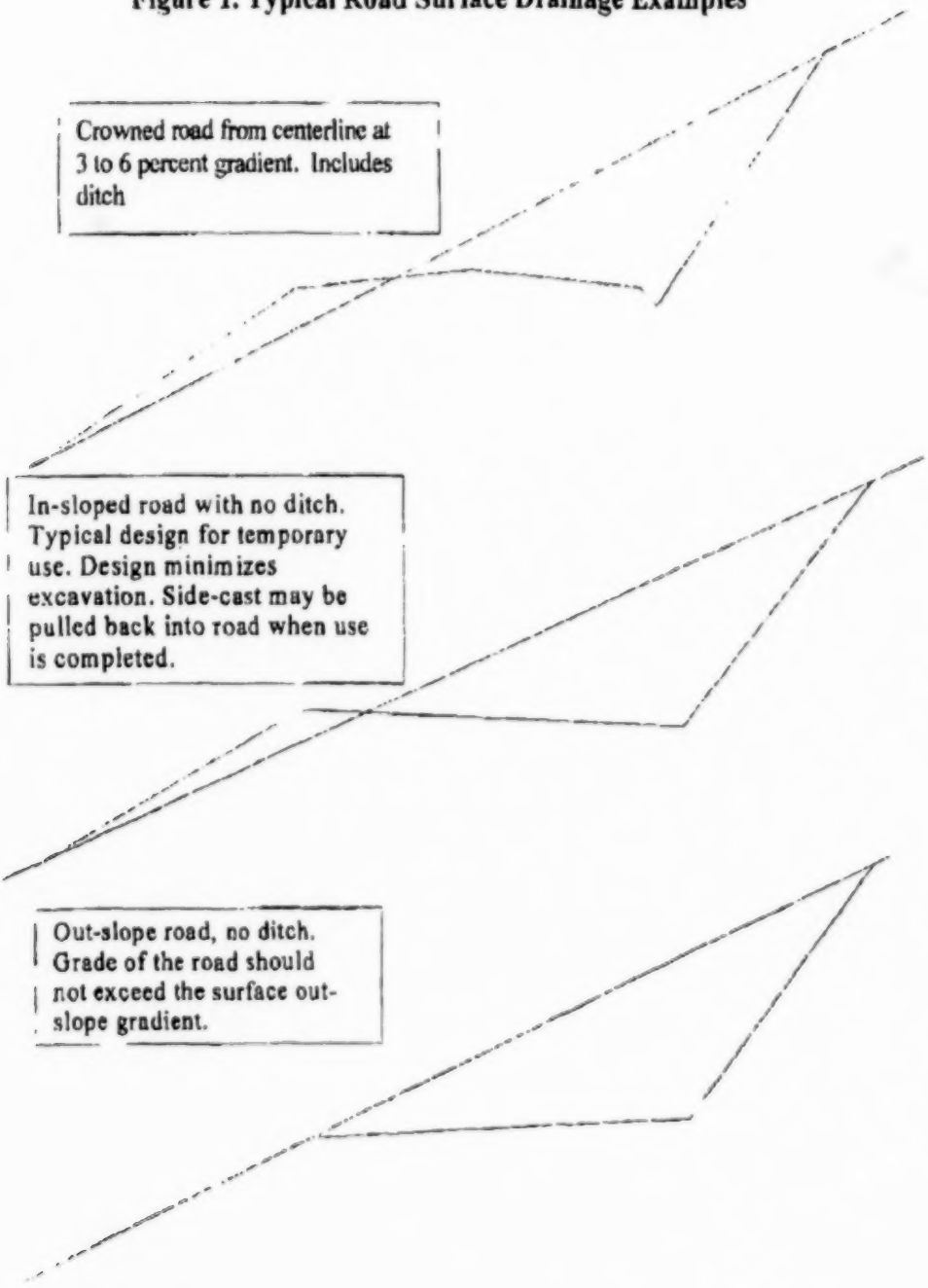
Good road surface drainage is important for keeping siltation to a minimum and to keep subgrades firm and stable to support the designed loads. Water intercepted by roads will be returned to natural flow processes as quickly as practical. Methods of achieving this are listed below.

1. **Subgrade shapes.** The running surface and subgrade must be shaped to move water off the road. Road surfaces will be crowned, in-sloped, or out-sloped for drainage. A "crowned road surface" is often preferred since it provides the shortest distance for water to travel off the road (from centerline to either road edge). Out-sloped roads can save on excavation and material costs since there is no ditch or cross drain. Outsloping will generally be limited to roads with grades less than 8 percent unless

they are temporary and will be closed or vacated after use. Water bars and water dips can also be used on temporary or very low use roads in lieu of a ditch. See "Figure 1. Typical Road Surface Drainage Examples" in this section.

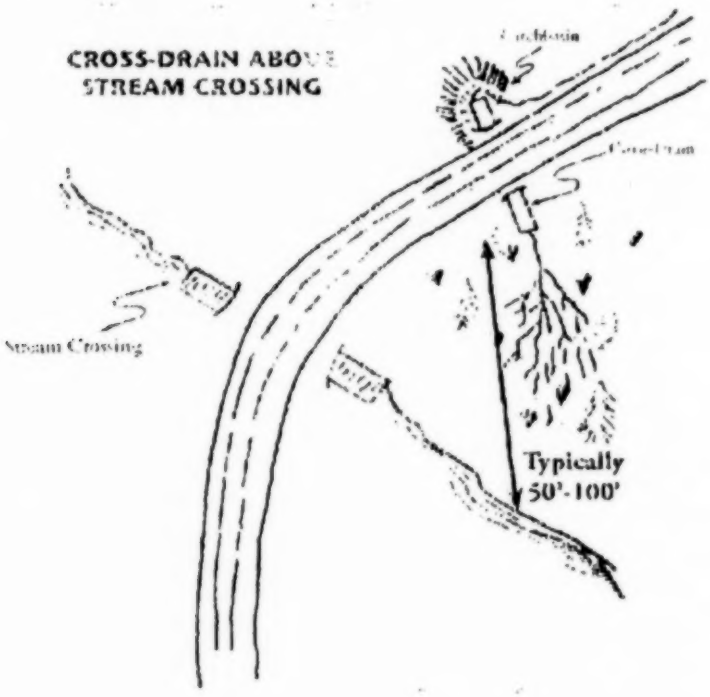
2. **Road Grades.** Road grades will be kept between 2% and 18% whenever possible. Flat grades will be avoided where possible; a minimum of 2% road grade will be favored to help to drain water out of the road prism. Steep grades above 15% should also be avoided. When steep grades are used, closer scrutiny of drainage for proper spacing of culverts, water bars, water dips, road grade reversals, and road surface maintenance is required.

Figure 1. Typical Road Surface Drainage Examples



3. **Drainage Structures.** A properly designed road will provide a drainage system using grade reversals, ditches, culverts, dips and/or water bars as necessary to effectively control and disperse surface water to minimize erosion of the road. Water will not be diverted from normal channels except as necessary to construct stream crossings. Drainage will be provided when roads cross or expose springs, seeps, or wet areas. Road drainage water should not be dispersed into headwalls, slide areas, or high-risk sites.

   Dips, water bars, or cross-drainage culverts should be located above and away from stream crossings so that road drainage water may be filtered before entering streams. Wherever possible, locate relief drainage 50 to 100 feet above stream crossings to eliminate the direct connection between road water and streams. The ditch-disconnect structure should be located in an area that will have at least 50 feet of filter distance to the stream.



   Ditch relief culverts will be placed at appropriate distances and locations along roads to prevent large accumulations of water running down ditchlines and to prevent direct discharge of ditch water into streams. See "Table 1. Guide Table for Water Bar and Relief Culvert Spacing".

Table 1. Guide Table for Water Bar and Relief Culvert Spacing

Recommended Maximum Spacing in Feet of Lateral Drainage

ROAD GRADE in %	SOIL EROSION RATING*		
	High	Normal	Low
0-4%	800	1000	1500
5-9%	500	800	1000
10-14%	300	400	500
15-19%	200	300	400
over 19%	150	200	300

**High* = *Cohesionless fine-grained soil*
Normal = *Sandy loam*
Low = *Rocky /gravelly soil*

The table above will be used as a guide. The road designer should also examine other roads in the immediate area to find out how well ditches and existing culvert spacings are performing. If necessary, the spacing should be adjusted to fit the local conditions.

The smallest culvert used will be 18 inches in diameter. Culverts smaller than 18" plug easily and present maintenance problems. Smaller diameter culverts will only be used in temporary applications where the culvert will be removed at the end of the use of the road.

Culverts will be located away from high-risk sites whenever possible, in order to disperse water on to stable locations (noses or ridges). When this is not possible, the geotechnical specialist will be consulted.

4. **Running surface.** The running surface of the road will be designed for the anticipated use. Rock surfacing can provide two important functions. First, a Layer of rock surfacing will help to spread vehicle tire loads over a larger area of the subgrade to help prevent rutting and subgrade failure. Secondly, a compacted layer of rock helps to seal the running surface, thus serving to move water away from the subgrade. Roads that will be open and used for hauling during wet weather will have rocked surfacing that will provide subgrade reinforcement and resist the erosive effects of water. Surfacing design is beyond the scope of this manual, however there are a number of factors identified below that will influence the decision to use surfacing and the types/amounts to use.

Advantages of rocking a road:

- Allows use of the road during wet periods
- Increases road subgrade strength, thus reducing the chance of wheel rutting during use.
- Provides a more stable, erosion resistant surface to the road, thus improving overall road drainage
- Provides base material (instead of dirt) that a grader can shape into a stable and longer lasting subgrade profile
- Reduces the amount of sedimentation produced by the road
- Reduces road maintenance needed to keep road performing properly
- Improves traction during wet weather
- All season access may increase the value of the area accessed for both commercial and non-commercial purposes. For example: reducing down time for wet weather could enhance the efficiency of a logging operation or a road could provide access for recreation throughout the year.

Disadvantages of rocking a road

- Cost, by far this is the single biggest factor - surfacing expense will often double the total cost of the road.
- May increase the cost to decommission the road in the future

Table 2 will be used as an aid in deciding when a road should be rocked and when it should not be rocked.

Table 2. Guidelines for Rocking a Road

Factors "for" rocking the road	Factors for "not" rocking
Road is in a coastal or valley climate	Road is in a dry climate such as Eastern or Central Oregon
Soil type is weak and poor draining, prone to erosion	Well drained gravely soil
Grade of road is steep, any water will have potential to run down the road and erode the surface	Gentle road grade, less than 8%
Road is close to a stream and could deliver sediments easily	Road is not near streams and there are filtering opportunities for runoff from the road prior to entering a stream
	Road is located on a ridge or high on the hill slope and there is little risk of damage from sedimentation.
The road use is permanent and access is needed throughout the year.	This is a one time or one season road use that could be timed to occur during dry periods of the year
It is not practical or possible to close the road during un-needed periods	The road can be vacated or closed after short-term use.
Heavy use is planned for the road; several million board feet of timber will be hauled over the road.	Only a small amount of timber hauling anticipated on the road, part of one sale for example.
	Operations requiring this road could be shut down during wet periods and access to other parts of timber sale could be operated on at that time.
Rock is readily available and relatively inexpensive.	Rock is scarce, must be hauled long distances and is expensive to apply.
High use recreation area that would make it difficult to keep traffic off road during wet seasons.	Road can easily and effectively be blocked until weather permits use.

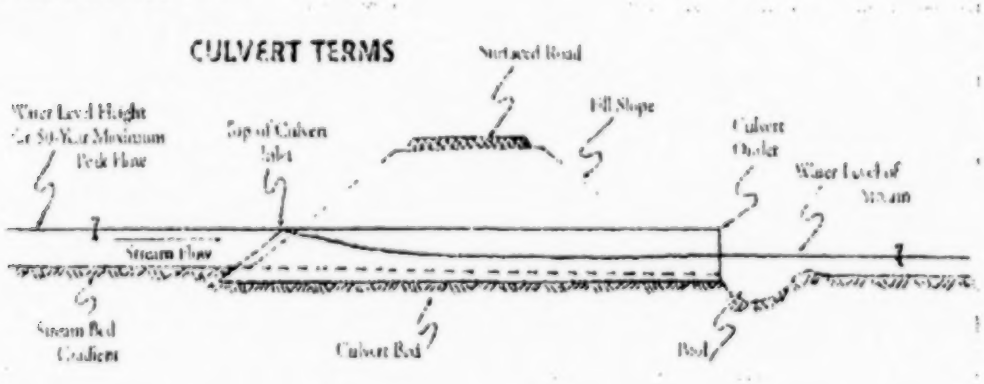
5. **Special Drainage.** Special drainage may be needed for areas containing springs or areas that have slope stability problems that are caused by subsurface water. The geotechnical specialist should be consulted for advice and assistance to design drainage structures that will help alleviate problems in these areas.

Design of Stream Crossing Structures

Stream crossing structures must protect aquatic and riparian habitats and provide fish passage, as well as preserve the stability and use of the road. The following requirements must be considered when designing stream crossings:

1. Streams will be kept in their natural channel and not diverted to crossing structures.
2. The number of acres in the drainage above the stream crossing structure will be determined from orthophotos, maps, aerial photography, or other comparable methods. This information is needed to determine the appropriate size for a stream crossing structure.
3. As a minimum, all new stream crossing installations or replacements of existing crossings will be sized to pass stream flow levels as predicted by the 50-year storm return interval. The Oregon Forest Practices Act guidance provides a culvert-sizing design method that can be used for minimum design standards of stream crossings on state-owned forest lands.
4. Include design features that will minimize damage in the event the structure becomes plugged and fails. In many cases this is more effective than simply designing larger structures for larger storm events. Designed safety features may include some or all of the following:
   - Lowered fill heights to minimize back-watering effects and dam break floods.
   - Dips in the road, downgrade from the stream crossing, that would divert water off the road and onto the best available locations.
   - Armored fills at stream crossing and/or dip locations.
   - Overflow culverts
5. Road crossings over fish-bearing streams will be designed to allow fish passage. The design of stream crossings will follow the guidance in **Oregon Road/Stream Crossing Restoration Guide: Advanced Fish Passage Training Version. Oregon Department of Forestry. Spring 1999** (or later version, if available)
6. All permanent bridges will be designed and approved by a licensed civil engineer.

FISH PASSAGE . . .



Temporary Road Design by Purchasers of Timber Sale Contracts

At times the purchaser of Department timber sale contracts will request and/or the Department will require that the purchaser locate, design, and construct temporary roads to facilitate the logging of Department of Forestry timber sales. This approach enables the purchaser to match road and landing locations with the planned yarding system. When this approach is used, the location and design of the roads and landings will be approved by the Department as part of the Operations Plan required by the timber sale contract. Roads and landings designed under this approach will meet all of the goals and objectives of this section of the manual. Variances from the procedures, standards and criteria set forth in this section of the manual must be approved the Department.

Since these roads are temporary, consideration will be given to vacating the road at the completion of use. If the Department does not need the road for management purposes (i.e. site preparation, reforestation, animal damage control, vegetation management, etc.), the Operations Plan should include the requirement for the purchaser to prepare the road for vacation. (See Section 8 on Forest Road Vacating)

Road Design by Easement Holders

At times adjacent landowners will be granted easements to construct roads across state-owned forest land in order to access their property. When these easements are granted, the Department will approve the location and design of the roads on state-owned forest land. The design of the roads will meet all of the procedures, criteria, and standards included in this section of the manual.

Road Construction

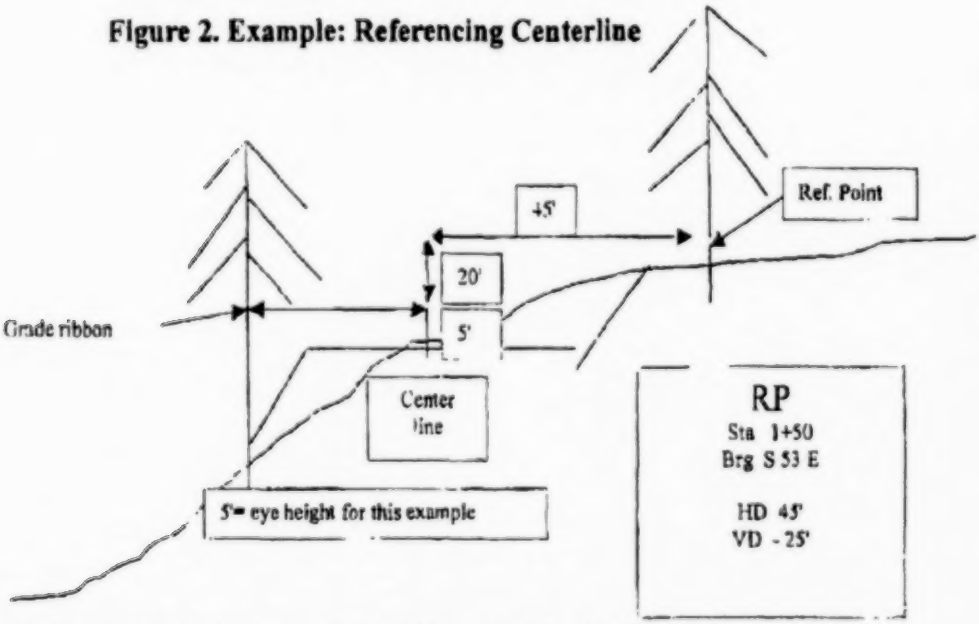
The design of a road construction or reconstruction/improvement project will include specifications that will minimize adverse impacts during the construction phase. Items to include are:

- Limiting construction activities to drier periods of the year, especially any activity involving exposed soil such as grubbing, excavation or grading.
- Curtailing activities on exposed soil during rain events, even when they occur during the dry season.
- Establish and maintain drainage throughout the construction phase.
- Take precautions to prevent siltation when rain is likely to occur. Precautions include hay bales, filter cloth, or other measures placed in ditch lines or other strategic locations to filter runoff water.
- When in-stream work is necessary, it should be accomplished during seasonal periods recommended by a fish biologist. A written plan is required by the Oregon Forest Practices Act and must be approved before working in a Type F (fish bearing) or Type D (domestic use) stream.
- Soils exposed by road construction or improvement that could enter streams will be seeded with grass or other vegetation to prevent erosion. These areas will be

seeded at a time conducive to growing new grass and prior to the start of the wet season. Spring and fall periods are generally preferred for grass seeding.

Referencing Centerline Location Centerlines on new roads and road improvement projects are referenced so that the centerlines may be located at any time during or after construction. The number of reference points needed will vary and should be determined by the complexity and sensitivity of the project i.e. the more complex and/or the more sensitive the project, the more reference points that should be established.

Figure 2. Example: Referencing Centerline



A typical reference tag (4" aluminum tag) should have the following information or more if desired:

- Stationing.
- Bearing to centerline.
- Vertical and horizontal distance to centerline.

Reference spacing guidelines are:

- Slopes less than 50%: reference every 200 to 300 feet.
- Slopes greater than 50%: reference every 100 to 200 feet.
- Critical end haul areas: reference every 50 to 100 feet, or as needed.

The most common method of establishing road grade is to tie grade ribbons so that when your eyes are level with the ribbon your feet are on grade. In order to mark a reference tag you need to measure and calculate the following:

- Horizontal distance from tag to centerline.
- Vertical distance from tag to grade ribbon plus eye height.
- Bearing to centerline point and stationing.

The information on the reference tag will represent distances and bearings from the tag (not the ground) to the centerline of the designed road at the grade (ground) elevation.

Culvert Referencing

All culvert installations will be referenced with a 4" aluminum tag prior to the completion of road design work. The standard reference tag shall have the following information as a minimum:

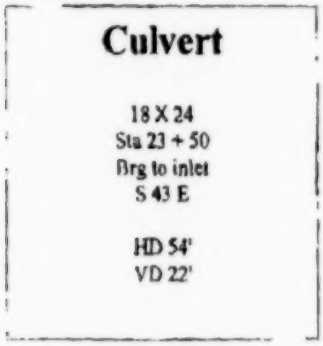
- Structure description, i.e., "culvert".
- Stationing.
- Size of culvert, i.e., "18 x 24'

Optional information:

- Attachments such as 1/2 rounds.
- Horizontal and vertical distance to culvert inlet, outlet.
- Bearing to either end of culvert
- Skew angle of culvert.

It is also a good idea to paint culvert information on the tree in case the tag falls off.

Figure 5. Example: Culvert Tag



Some surface drainage culvert locations are more apparent after the subgrade is constructed, particularly on low use roads where the constructed road may vary slightly from the design. The project administrator may relocate relief culverts in these instances.

Cut and Fill Slopes

The angle of the cut and fill slopes of a road can have a significant impact on the amount of ground taken up by the road and the stability of the hillside in the area around the road. The steeper the road slopes are, the less ground that is taken up by the road prism. The main problem with steep cut and fill slopes is that they can become unstable if they are constructed overly steep. The following table provides guidelines for cut and fills slope angles that will minimize slope instability and the foot print of the road on the hillside.

Table 3. Road Cut and Fill Slopes Angle Guidelines

Material	Compacted Fill Slope	Sidecast Fill Slope	Cut Slope
SOIL			
Silty sand			
No groundwater *High groundwater	1.5:1 2:1	2:1 3:1	.75:1 1.5:1
Soft clay, silts	Variable		
Sandy gravel			
No groundwater *High groundwater	1.5:1 1.75:1	1.5:1 1.5:1	.75:1 1.5:1
ROCK			
Solid – Fresh			**.25:1 to Vertical
Weathered – Stained			.25:1 to .75:1
Partially decomposed rock			.75:1 (with extra maintenance for ravel) 1.5:1 (slope with no ravel)
Cemented sands, silts, gravels			Vertical or .25:1

* May require special drainage, buttress, or other means of stabilization.

** With controlled blasting the back-slope will not shatter, and vertical slopes are usually the best design unless there is rock structure, bedding, jointing or fracturing which dips steeply out of the road cut. If this is the case, cut angle should be equal to the angle of the rock structure.

Contact the geotechnical specialist for "special problem rock slope design recommendations."

Landings and Turnouts

Landing size requirements vary with size and kind of equipment, log size, loader configuration (heel boom, front end, etc.), sorting situation, cold decking vs. hot decking, the possibility of skidding logs to a different loading area, yarding configuration, lead (square, straight, V), and other factors.

Landing size should be:

- Large enough to heel and swing logs without striking standing timber, rigging, or other equipment or objects. Operators will be directed to keep landings as small as possible. The maximum size should not exceed 1/5 acre.
- Long and level enough so that at least 2/3 of the longest bucked log to be yarded will rest on the ground. (Exception: this is not intended to restrict the yarding or loading of logs for poles piling, or an infrequent long break or tree length, provided the log is secured before unhooking the choker.)
- See figures 6 snd 7 (this section) for landing size examples.

Figure 6. Example of Road Bed Used as Landing

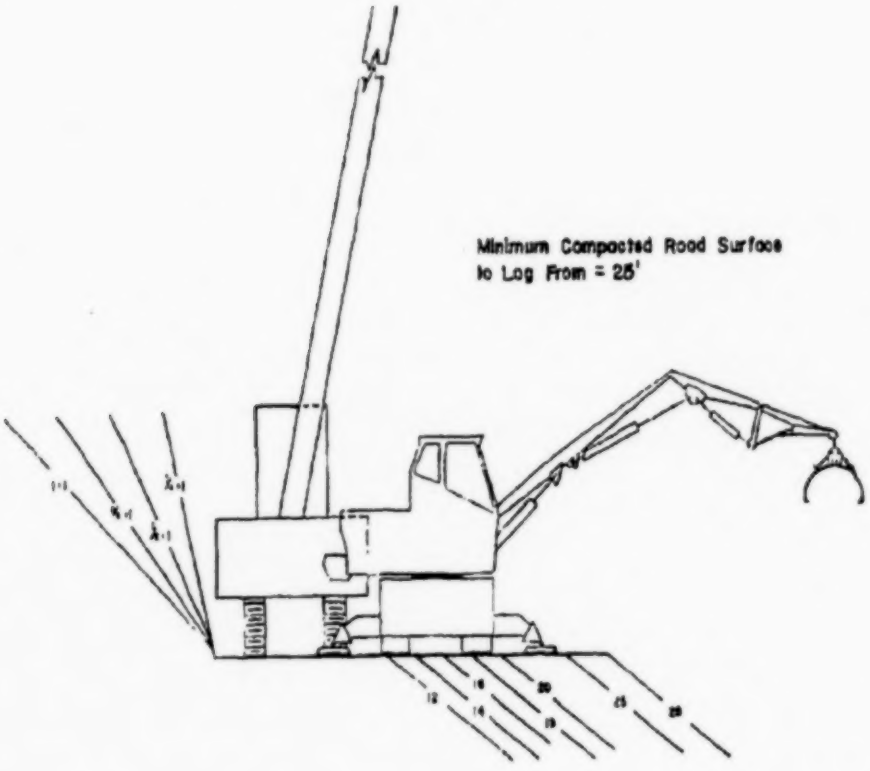
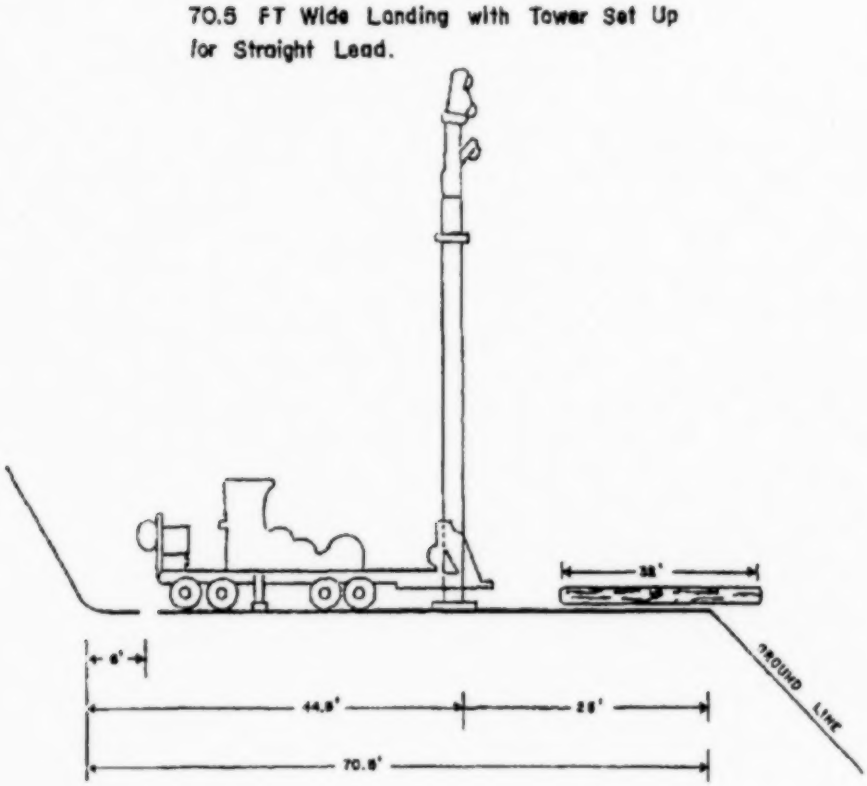


Figure 7. Example of Landing for Large Yarder



Landing construction should be:

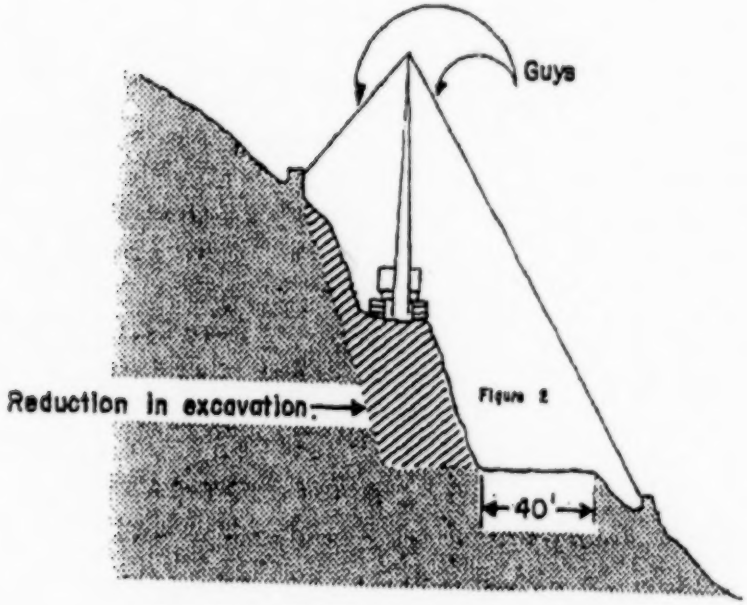
- Reasonably level but with enough slope to provide drainage. Maximum slope should not exceed 8 %.

  Usually an empty log truck ready for loading can start on about a 6 % grade, on a good crushed rock surface. If the truck has to maneuver on a steep grade, assistance may be needed.

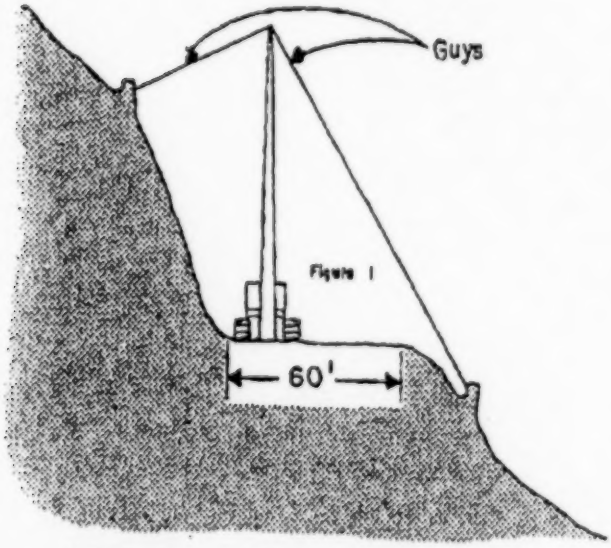
- The slope in log chute areas can be up to 20 % if logs are decked perpendicular to slope. High decks will require flatter areas.

- Split-level construction can often save up to half the excavation required for a single level landing. See Figures 8 and 9 this section for example of split-level landing construction.

Figure 8. & Figure 9.



SPLIT LEVEL UPHILL SETUP



NORMAL UPHILL SETUP

- Cut and fill construction can save excavation, but avoid landing fills on slopes over 50 % because of the likelihood for these fills to become overhangs of mixed dirt and slash during use. Such overhangs may slide out years after use, causing

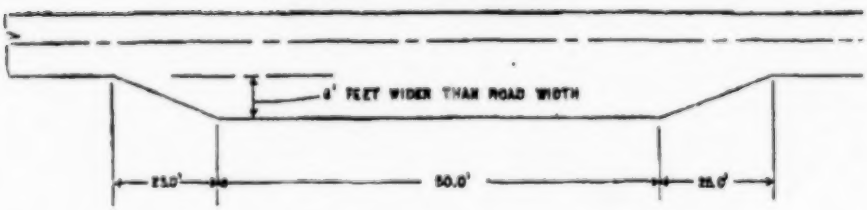
soil and stream damage below. Consider end hauling the clearing and grubbing debris around landings where slopes are 50% or greater, due to the slope instability potential and safety hazard for the loggers working below the landing. Do not place landing fill on slopes over 65%.

Turnouts are to be intervisible with a maximum road distance of 750 feet between turnouts on mainline roads. Turnouts on shorter spur roads may be placed where the terrain allows. Since speeds are reduced on spur roads and most logging operations now use CBs it is not as important that turnouts be intervisible. They should be at least 8 feet in width and 50 feet long with a 25-foot transition at each end. (See Figure 10 for diagram of typical turnout and Figure 11 for diagram of typical turnaround

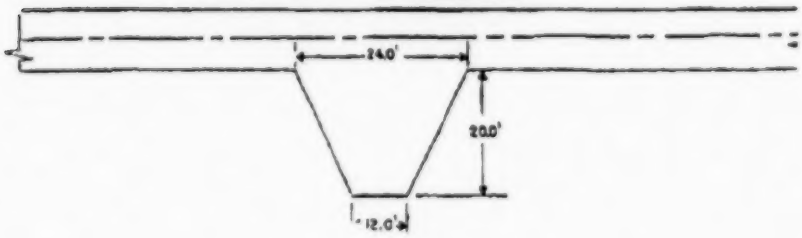
Figure 10. & Figure 11.

LOGGING ROAD SPECIFICATIONS.

TYPICAL TURNOUT



TYPICAL TURNAROUND



Curve Widening

The rear wheels of most vehicles will not track in the same path as the front wheels when traveling around a curve. This is called off-tracking. Extra subgrade and surfacing width may be necessary on the inside of the curve to accommodate the off tracking of the rear wheels. The amount of curve widening needed depends on the type of vehicle, the original subgrade width, the radius of the curve, and the central angle of the curve.

There are three critical types of vehicles that travel forest roads that may be impacted by curve width: the log truck, the logging yarder (on wheels), and the lowboy truck and trailer. The standard log truck tracks the best of these three, due to the configuration of the truck utilizing a stinger as the attachment point for the trailer. The logging yarder does not track as well as a log truck, due to its longer wheelbase. Finally, the lowboy truck will not track as well as the yarder, due to the long wheelbase of the truck and the longer wheelbase of the trailer. The trailer-mounted yarder pulled by a truck will usually off-track somewhere between the lowboy and self-propelled yarder. Sometimes yarders can be moved around corners with crawler tractors or other assist vehicles, which could improve their tracking ability on a temporary basis.

Since roads on state-owned forest land are designed as logging roads and not highways, not every factor will be evaluated in calculating extra curve width. The rule of thumb below, while not exact, will provide adequate curve width for the following vehicles.

Log Trucks and Yarders

Rule of Thumb: 400 divided by the radius = additional curve width

For a narrow subgrade (under 16 ft.), additional widening may be necessary, since the margin of safety or error for off-tracking on a narrow road would be less than on a wider subgrade. The amount of subgrade width less than 16' will be added on to the curve-widening formula as shown below.

Rule of Thumb: (400 ÷ Radius) + (16' - subgrade width) = additional curve width

Lowboy Truck and Trailer

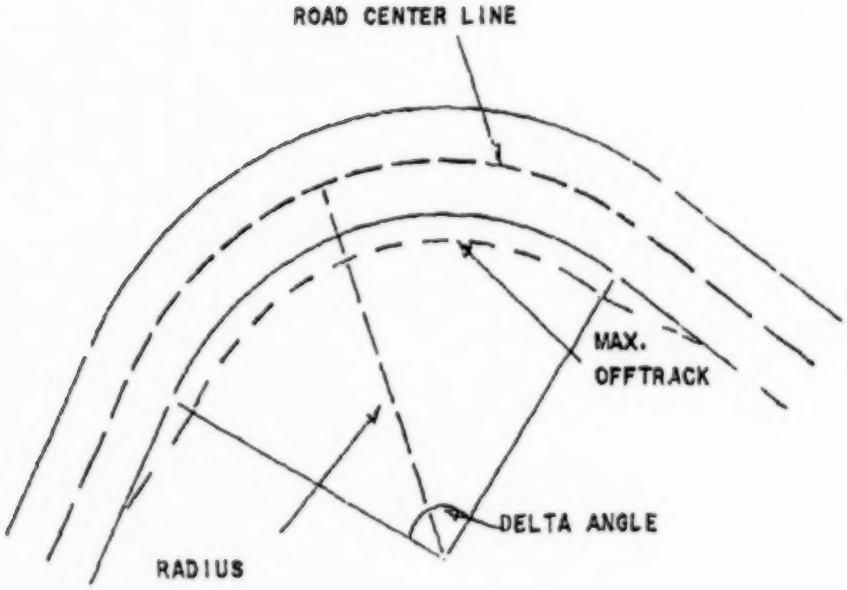
See Appendix 2 for Maximum Vehicle Off-Tracking for lowboy trailer (36'). The amount of off-tracking equals the amount of curve widening needed.

Good judgement and engineering skills must be used to design roads when vehicles with long overhangs will be traveling around curves. A vehicle such as a yarder with the tower down and traveling around a curve may have clearance problems with the cut-slope on the outside of the curve. This is particularly problematic for narrow roads with vertical cut-banks in solid rock.

Note: curve widening is normally added to the inside of the curve. If curve widening is to be put on the outside of the curve, the radius of the curve is effectively changed and the amount of road width needed for that radius curve will be calculated.

Figure 12.

MAXIMUM VEHICLE OFF TRACKING
ON SIMPLE CURVES



Maximum Vehicle Off-tracking on Simple Curves

Maximum Vehicle Off tracking

On Simple Curves

Vehicle: 36 ft. Lowboy Trailer

Curve Rad. (ft)	Delta angle (deg.)	Off Track in ft.
50	10	2
50	20	4
50	30	5
50	40	7
50	60	9
50	80	11
50	120	13
50	180	14

Curve Rad. (ft)	Delta angle (deg.)	Off Track in ft.
60	10	2
60	20	4
60	30	5
60	40	7
60	60	8
60	80	10
60	120	11
60	180	12

Curve Rad. (ft)	Delta angle (deg.)	Off Track in ft.
70	10	2
70	20	4
70	30	5
70	40	6
70	60	8
70	80	9
70	120	10
70	180	10

Maximum Vehicle Offtracking

On Simple Curves

Vehicle: 21 ft. BU-199 Yarder (self propelled)

Curve Rad. (ft)	Delta angle (deg.)	Off Track in ft.
50	10	1
50	20	2
50	30	3
50	50	4
50	90	4
50	180	5

Curve Rad. (ft)	Delta angle (deg.)	Off Track in ft.
60	10	1
60	20	2
60	40	3
60	70	4
60	180	4

Curve Rad. (ft)	Delta angle (deg.)	Off Track in ft.
70	10	1
70	20	2
70	40	3
70	180	3